Germany	DM2.00	Malta	45 cents	Sweden	SKr12
Greece	Dr200	Morocco	MDh18	Switz	SFr2.70
Hungary	Ft145	Neth	Fl 3.50	Thailand	Bt50
Iceland	IKr180	Nigeria	Naira15	Tunisia	Din1.250
India	Rs25	Norway	NKr12.00	Turkey	L3000
Indonesia	Rp5100	Oman	OR1.20	UAE	Dh8.00

EUROPE'S BUSINESS NEWSPAPER

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D 8523A

UNEMPLOYMENT

A solution for east Germany

Page 16

World News

Zulus agree to curb use of 'cultural weapons'

President de Klerk of South Africa appears to have won an important concession from Zulu leaders on the carrying of "tribal weapons", or spears, in troubled black townships.

The agreement paves the way for relations to be restored between the government and the African National Congress. Page 18; Reversal on land claim decision, Page 6

India poll violence

At least 36 people were killed after violence erupted at the start of India's week-long parliamentary elections. Page 6

Yugoslav aid threat

European Commission officials warned that continued aid for Yugoslavia was threatened unless the country resolved its bitter ethnic conflicts. Page 2

Dohuk handed over

US troops entered the city of Dohuk in northern Iraq to prepare for the return of thousands of Kurdish refugees still stranded on the Turkish border. Page 6

Fighting halts aid

Fighting between Ethiopian government forces and rebels has halted a famine relief programme supplying up to a million drought victims, aid officials said.

Peking talks hitch

Talks to normalise ties between North Korea and Japan became bogged down over Tokyo's demand that Pyongyang open its nuclear sites to international inspection.

Thai heroin seized

Thai police seized more than half a tonne of heroin near the Cambodian border in their biggest drugs haul in three years.

Bangladesh turmoil

Violent storms returned to Bangladesh, killing more than 70 people and injuring 1,000, as a US task force stepped up efforts to save millions made destitute by last month's cyclone.

Journalists 'freed'

The Medellin drug cartel said it ordered the release of two kidnapped journalists to persuade the Colombian government to stop extraditing suspected drug smugglers. Page 4

Last-ditch air talks

Soviet government and union negotiators were locked in talks in an 11th-hour attempt to prevent a disruptive air traffic controllers' strike. Page 2

Computer blamed

US defence officials said a computer used to trigger US Patriot missiles failed to detect an Iraqi Scud missile that exploded and killed 28 Americans in Saudi Arabia during the Gulf War.

Polish remorse

President Lech Walesa, on a state visit to Israel, asked the Israeli people for forgiveness over the bitter Jewish accusation of collaboration with Nazis during the Second World War. Page 6

Harare protest ends

Hundreds of students returned to classes at Zimbabwe's only university, breaking a three-week anti-government boycott that prompted threats to oust the entire student body.

Mubarak reshuffle

President Mubarak of Egypt reshuffled his cabinet and appointed new defence and foreign ministers, but to some surprise there were no changes in economic portfolios. Page 6

Rubbish piles high

Polish authorities took emergency powers to call in troops and private firms to help clean the capital, Warsaw, as a strike by rubbish collectors entered its fifth day.

Business Summary

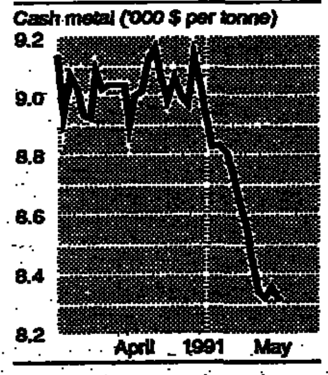
LTV plan to sell defence unit criticised by creditors

LTV, US steel company, announced plans to sell its large defence and aerospace business to help it out of bankruptcy proceedings but the plan has run into immediate opposition from creditors of the division.

LTV's defence and aerospace company makes missiles, rockets, space systems, military vehicles and sub-assemblies for military and commercial aircraft. The company, which employs 16,100 people, is the 20th largest defence contractor in the US with sales in 1990 of about $2bn. Page 19

NICKEL: LME nickel prices fell to session lows on general liquidation, but sporadic consumer interest prevented substantial losses, dealers said. Three months traded last at 8,300 dlrs a tonne, down 100 dlrs from Friday's kerb close. Commodities, Page 30

Nickel



MARKETS: In New York an early rise in bond values helped boost sentiment in the stock market, but gains were relatively modest, with the Dow Jones Industrial Average edging up 7.38 at 2,894.01 by 1.30 pm. Tokyo: share prices declined across the board as thin volume accentuated selling by arbitrageurs and investment trusts. The Nikkei average fell 178.91 to 25,523.03 on volume down 90m to 260m shares. Most European bourses were closed for Whit Monday and Toronto was closed for Victoria Day. Of those that were open, Fiat continued to weigh down the Italian bourse on renewed fears that the company would cut its 1990 dividend. Spain moved higher in quiet trading, but most of the excitement was restricted to the emerging markets. World Stock Market reports, Back Page, Section II

MONTEDISON, Italian chemicals, energy and agro-industrial concern, reports consolidated after-tax profits, net of minority interests, of L556bn ($433m) for 1990. Page 19

EC and the Australian-led Cairns Group of agricultural exporting nations within the negotiations of the General Agreement on Tariffs and Trade appeared firmly at odds after talks in Canberra failed to break down differences over trade liberalisation. Page 7

BOND Corporation shareholders approved a proposed debt-for-equity swap leaving Mr Alan Bond, former chairman, with less than 6 per cent of the group's shares. Page 20

JVC, Japanese consumer electronics company, reported a 27.1 per cent drop in consolidated pre-tax profits for the year to March 1991 to Y26.3bn ($190m). Page 20

OMRON, Japan's top maker of control components, reported a 2.3 per cent rise in pre-tax profit to Y27.775bn ($200m) for the year to end March, reflecting continued growth in the Japanese economy. Page 23

THREE leading Japanese real estate companies, Mitsui Real Estate, Mitsubishi Estate and Sumitomo Realty saw strong sales growth for the year, but pre-tax profits did not keep pace under tighter financial regulations. Page 23

Soviets to lift restrictions on travel abroad in 1993

By Leyla Boulton in Moscow

THE Soviet parliament yesterday approved a law allowing free travel out of the country for the first time which the US has made a condition for improving trade relations.

However, what should have been a milestone for human rights was marred by a decision to postpone its implementation until 1993.

After rejecting the bill three times last week, deputies finally approved it in principle by 320 votes to 37 with 32 abstentions. This means that the law, which has yet to be debated article by article, can still be modified.

The US has made free exit from the Soviet Union a precondition for granting the Soviet Union most favoured nation status. The White House said the law was a hopeful sign but that it was too soon to say whether it would allow the US to extend favourable trade status to Moscow.

"It still has another step to go in their legislative process, so we'll have to wait and see whether it satisfies our concern and our conditions for MFN (most-favoured-nation status)," Mr Marlin Fitzwater, White House spokesman, said.

The Foreign Office welcomed the law but said it would have to study the full details before Britain made a decision on whether to attend the scheduled human rights conference due to be held in Moscow in October.

British officials said that liberalising emigration was only one of the conditions the western countries wanted to see fulfilled before they participated in the conference.

The others included judicial independence, reform of Soviet criminal legislation, freedom of speech and freedom of religion.

A decision by the US, Britain and other western countries on their participation will only be taken on the basis of careful study of all the components making up greater human freedoms. No date has been fixed for such a decision, but it seems likely that it will be taken later in the summer.

The passing of the legislation coincides with intensive Soviet efforts to secure substantial western financial assistance for genuine market reforms.

The Soviet government, which originally asked for the legislation to come into effect in July 1992, says it needs time to overhaul its cumbersome travel bureaucracy, at a cost of Rbs300m.

No doubt it is also afraid of a drain on its scarce hard currency resources.

Conservative opponents of the bill, who were instrumental in postponing its implementation still further, voiced fears it would trigger a "brain drain" and encourage smuggling by dreaded "speculators".

The law was given preliminary approval in parliament almost two years ago.

Soviet authorities estimate that between 500,000 and 3m people will emigrate once the law is passed.

Nearly half a million people emigrated last year, mainly to Israel and West Germany.

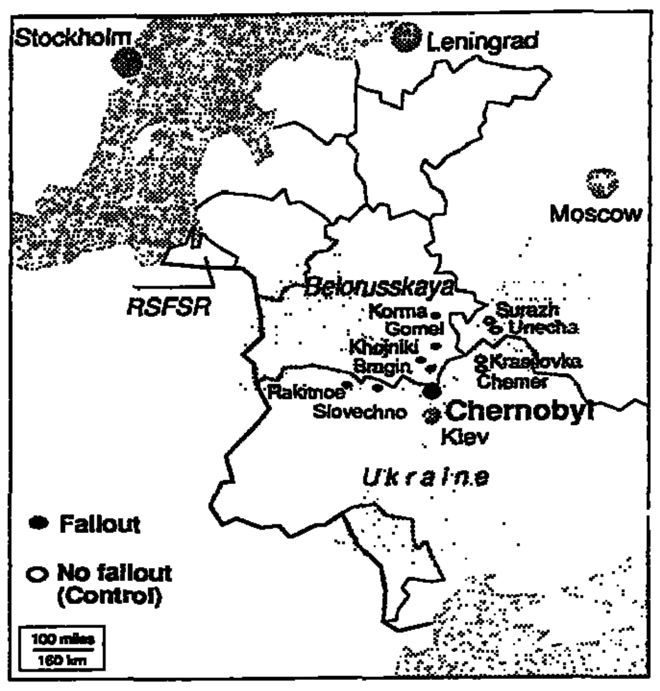
But even if Soviet travel laws are liberalised, Soviet citizens will have to overcome tough new visa requirements by western countries, as well as long domestic waiting lists for train and aircraft tickets.

Although restrictions have been eased considerably since President Mikhail Gorbachev came to power six years ago, Soviet citizens still require an exit visa and an invitation from foreign hosts, even for short trips abroad.

The new law provides for the unrestricted issue of foreign travel passports – except to people facing military service or criminal investigation.

It imposes a five-year waiting period, however, on people deemed to hold state secrets.

Air traffic Talks, Page 2



Chernobyl study rejects reports of widespread illness

By David Fishlock, Science Editor, in London

THE FIRST international study of the effects of nuclear fallout from Chernobyl has rejected reports of widespread sickness in the five years since the Soviet nuclear explosion.

It did, however, find widespread anxiety among the population about the adequacy of measures taken by the authorities as well as distrust of the Soviet government and medical and scientific communities.

The International Chernobyl Project, set up by the United Nations at the invitation of the Soviet Union, involved about 200 doctors and scientists from 25 nations, and seven international organisations including the World Health Organisation.

The investigations, lasting more than a year, did not examine the exclusion zone within a radius of 30km around Chernobyl itself – from which residents were moved rapidly in the wake of the explosion.

Instead, it concentrated on areas up to 500km from Chernobyl which were subjected to the drifting radiation cloud.

Rain washed down radioactivity to contaminate large patches of ground in the area, mainly with radioactive caesium from the reactor fuel.

The study found that the Soviet children most exposed to fallout were now generally healthy. However, there appears to be a high level of ill-health among Soviet adults, with 10 to 15 per cent needing medical treatment, although this apears unrelated to the accident, according to the report.

The investigation found that there been no marked increase in cancer, leukamia, cataracts, or other diseases related to radiation, and there was no evidence of an increased level of birth defects, in sharp contrast to reports around the fifth anniversary of the accident late last month.

Radiation experts point out that previous experience of accidents shows that it takes more than five years for radiation-related diseases to appear.

Given the increase in the reporting of cancer cases in the Soviet Union over the past 10 years, it may be that the effects of Chernobyl-related incidents would be very hard to detect.

In Vienna today the UN's International Atomic Energy Agency will begin a four-day conference to examine the project's medical and radiological findings.

The study group was asked to assess the radiological consequences of the accident for the three affected Soviet republics – the Ukraine, Byelorussia, and the Soviet Federation – and to evaluate the protective measures undertaken by the government.

Headed by Dr Itsuzo Shigematsu, director of the Radiation Effects Research Foundation at Hiroshima, the group

Continued on Page 18

Kohl calls for United States of Europe

By Peter Riddell, US Editor, in Washington

CHANCELLOR Helmut Kohl, on his first visit to the US as head of a united Germany, yesterday called for the creation of a United States of Europe with continuing strong links to North America.

Mr Kohl sought in a series of meetings and public appearances to offer reassurance that political unification and moves towards the creation of a European defence and security pillar would not weaken Atlantic ties. His comments came in the context of current European Community discussions on political union and the parallel Nato strategy review.

Western European unity would strengthen rather than weaken the Nato alliance, he said. Any European pillar would be inside Nato, rather than an alternative to it.

Earlier this year there was friction following warnings by Washington that European moves should not exclude the US and that Nato, rather than an exclusively European body, should remain the focus for collective defence matters.

Chancellor Helmut Kohl is greeted by State Department officials on arriving in the US

This aim, underpinned by Nato's integrated military structure, was reaffirmed in a joint statement 10 days ago by Mr James Baker, US secretary of state, and Mr Hans Dietrich Genscher, the German foreign minister, in the hope of narrowing differences on the issue.

Following criticism of the absence of German troops from the allied effort in the Gulf, the chancellor said he was confident that German forces would in future be able to serve outside the Nato area under the auspices of the United Nations or the Western European Union.

He also pressed the case for western support for Soviet President Mikhail Gorbachev. "It cannot be our objective to help bring about the dissolution of the Soviet Union", he said.

The US and Germany have been discussing how to respond to Mr Gorbachev's appeal for western support for his economic reform programme and his desire to attend the annual summit of the Group of Seven leading industrial nations in London in mid-July.

US and British officials are cool to the idea of Mr Gorbachev attending the summit unless he gives a positive commitment on reform. Even if the Soviet leader does attend, he will not participate in the main summit sessions.

UN to exact war reparations from Baghdad's oil revenues

By Michael Littlejohns in New York and Victor Mallet in London

THE UN Security Council yesterday approved a plan to exact war reparations from Iraq by establishing a compensation fund to be financed by Iraqi oil revenues.

Mr Javier Perez de Cuellar, the UN Secretary General, was asked to begin consultations about setting a ceiling for the fund.

Its governing council will comprise all 15 members of the Security Council and work from the UN's European headquarters in Geneva, although the day-to-day operations of the fund may be administered from other financial centres, including London. Initial claims on the fund could amount to as much as $100bn.

"The scale of the compensation exercise is very large," Mr Jeremy Carver, a international lawyer, said yesterday at a conference in London about the future of Kuwait.

"One is looking at perhaps 2m claims being made to this compensation fund, claims of all possible sizes from all parts of the globe."

US officials have called for 40 to 50 per cent of Iraqi oil revenues to be diverted to the fund, but other governments want a lower figure and a compromise may eventually be reached at around 25 per cent – slightly less than the amount that Iraq was spending on military imports before it invaded Kuwait in August last year. Frozen Iraqi assets will not contribute to the fund.

Iraq has already protested that the compensation plan, first proposed by Mrs Margaret Thatcher when she was UK prime minister, would beggar a generation or more of its citizens.

But there was no public debate in the Security Council yesterday since reparations were part of the ceasefire terms imposed last month and accepted by Baghdad.

Since the embargo remains in place – and the US and Britain have suggested they want sanctions to stay until President Saddam Hussein is overthrown or yields power – it may be some time before any claimants receive compensation.

However, the Council also warned that, if Iraq failed to comply when all procedures were in place, the world body intended "to retain or to take action to reimpose" sanctions.

Fourteen of the 15 members voted for the resolution, initiated by Britain and the US. Cuba abstained. It was the seventeenth security council resolution on the Gulf crisis.

Based largely on a programme prepared by the secretary general under the ceasefire terms, the resolution establishes the fund to pay compensation for "any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait."

A UN Compensation Commission, overseen by the Governing Council, will administer the fund.

Troops make ready, Page 6

CONTENTS

Tokyo hoping to begin a new relationship with Brussels

EC president Jacques Delors is due in Tokyo tomorrow. Both sides want the visit to mark the start of a new relationship – one in which the agenda will no longer be led by trade disputes

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MARKETS

STERLING
New York lunchtime:
\$1.7200
London:
\$1.7190 (1.7165)
DM2.970 (2.98)
FFr10.0775 (10.075)
SFr2.5075 (2.5175)
Y237.50 (237.0)
£ Index 91.7 (91.8)

GOLD
New York: Comex Jun
\$358.1 (356.0)
London:
\$355.35 (355.35)

N SEA OIL (Argus)
Brent jul
\$19.575 (19.575)

Chief price changes yesterday: Page 19

DOLLAR
New York lunchtime:
DM1.7270
FFr5.8555
SFr1.4585
Y138.15
London:
DM1.728 (1.736)
FFr5.8625 (5.87)
SFr1.458 (1.467)
Y138.20 (138.45)
\$ Index 66.4 (66.3)
Tokyo close: Y138.80

US lunchtime rates
Fed Funds $5\frac{13}{16}$%
3-mo Treasury Bills: yield: 5.615%
Long Bond: $99\frac{3}{16}$
yield: 8.264%

STOCK INDICES
FT-SE 100:
2,466.6 (+12.7)
FT Ordinary:
1,927.3 (+1.1)
FT-A All-Share:
1,192.35 (+0.4%)
New York
DJ Ind. Av.
2,893.56 (+6.93)
S&P Comp
372.97 (+0.58)
Tokyo: Nikkei
25,523.03 (−178.91)

LONDON MONEY
3-month Interbank:
closing $11\frac{9}{16}$% ($11\frac{5}{8}$)
Liffe long gilt future:
$90\frac{5}{8}$ ($90\frac{13}{32}$)

Soviet air controllers hold last minute strike talks

By Leyla Boulton in Moscow

SOVIET authorities were last night locked in last minute negotiations to avert the country's first ever strike by pilots and air traffic controllers, who threatened to close down Soviet airspace from midnight yesterday.

Mr Boris Panyukov, the Civil Aviation Minister, has said the government would bring in military air traffic controllers to keep Soviet airspace open. The government has also vowed to prosecute workers who defy a strike ban in the transport industry under a newly-created special regime for key sectors of the economy.

By threatening strike action, the country's 17,000 air traffic controllers together with 40,000 Aeroflot pilots, have already won important concessions on their demands for bigger pensions and better working hours. Negotiations last night however centred on their demands for a 100 per cent pay increase - after the controllers and pilots dropped an initial demand for a 200 per cent pay rise.

International airline officials were on stand-by yesterday to cancel all flights to and from the Soviet Union, as well those between Europe and the Far East which cross Soviet airspace. The pilots plan a 24-hour warning stoppage but the air traffic controllers union have vowed to continue industrial action until their demands are met.

In a tacit admission that disruption would be inevitable even if military controllers are brought in, Mr Panyukov has said the Soviet Union would lose Rbs25m and $2m in hard currency for every day of disruption.

The threatened air strike is the first test of the government's resolve to take tough action to ensure the smooth functioning of key economic sectors since President Mikhail Gorbachev signed a decree establishing the special regime last week.

■ Moscow's radical mayor, Mr Gavriil Popov, failed yesterday to win a vote of confidence in his leadership and said he might resist his supporters' demands to run in free elections scheduled next month, Reuter adds from Moscow.

In an unruly and chaotic session of the Moscow City Council, a majority of deputies refused to vote for Mr Popov as a candidate in elections planned for June 12 – the first democratic mayoral poll in Soviet history.

About 100 of some 450 deputies left the debating chamber to avoid having to vote. Of those who remained, only 189 cast their ballots in favour of Mr Popov's candidature.

Brussels warns Yugoslavia over conditions for aid

By David Gardner in Brussels and Laura Silber in Belgrade

CONTINUED European Community aid and credit for Yugoslavia will be made conditional on the country remaining united, resolving its ethnic conflicts, and furthering economic and political reform, European Commission officials said yesterday.

The officials also made clear that Yugoslavia's hopes of closer relations with the Community hinged on meeting these conditions.

Mr Jacques Santer, prime minister of Luxembourg, which currently holds the EC presidency, and Mr Jacques Delors, president of the Commission, are to hold talks with the federal and republican governments in Yugoslavia before the end of this month, a Commission spokesman confirmed.

Officials said their message would be very clear. "If [Yugoslavia] really wants a closer relationship with the Community then [it] must maintain the territorial integrity of a united Yugoslavia," he said.

"The EC would find it very difficult to forge closer links with a constellation of independent republics," he added.

However, official results from a referendum on Sunday in the western republic of Croatia, confirmed that voters had overwhelmingly opted to leave the Yugoslav federation.

Yugoslavia is seeking an association agreement with the EC like those Brussels is currently negotiating with Hungary, Poland and Czechoslovakia. These are free trade agreements designed to lead eventually to full membership of an expanded Community.

Brussels has just finished negotiating a new financial package with Yugoslavia. Spread over five years, it will give the country access to Ecu730m ($908m) in soft loans from the European Investment Bank and the EC development bank, and will be earmarked for roads and railway infrastructure linking central Europe to Greece. The agreement has been held up by delays in reaching a transit agreement for EC lorries, rather than the instability inside Yugoslavia.

The conditions for aid set down by the EC coincided with a statement by Washington that it had not yet "reached a final decision" to suspend aid worth $5m to Yugoslavia, an official said. Under the the Nickles amendment, passed by Congress last autumn, aid to Yugoslavia was subject to a six-month review which expired on May 5. The amendment linked US aid to human rights and moves towards democracy which the State Department says have been blocked by Serbia.

Spanish fuel strike causes disruption

MORE THAN 4,000 Spanish fuel distribution workers began a three-day strike yesterday, disrupting private transport and forcing the state airline, Iberia, to cancel flights as unions stepped up pressure for more pay, Reuter reports from Madrid.

Long passenger queues built up at Madrid's Barajas airport as Iberia cancelled 179 flights, including 91 within Europe, causing delays of up to two hours on flights still running.

About 22,000 Iberia ground staff stayed away from work yesterday in their third 24-hour stoppage since last week when railway and telecom employees also went on strike.

Communists gain ground in Cyprus parliament

By Kerin Hope in Nicosia

BOTH the Greek Cypriot Communist Party, Akel, and the right-wing Democratic Rally increased their strength in the 56-member Cyprus parliament, according to final returns from Sunday's general election.

The result reinforces the standing of President George Vassiliou, an independent who is backed by Akel but also has good relations with Mr Glaskos Clerides, the Democratic Rally leader, particularly on handling the Cyprus problem.

Akel increased its share of the vote to 30.6 per cent and won 18 seats, up from 15 seats in the previous poll in 1985. Akel's policy of keeping its Communist label but running new candidates with a moderate left-wing background proved more successful than expected, analysts said.

Democratic Rally retained its leading position in the House, capturing 35.8 per cent of the vote and 20 seats, a one-seat gain. The biggest upset was for the Democratic Party of former President Spyros Kyprianou, which finished with 19.5 per cent of the vote and 11 seats, a loss of five seats.

Mr Kyprianou announced that he would not take up his parliamentary seat. There is speculation that he may soon be challenged for the party leadership.

OECD REPORT

E Europe 'must look to service industries'

By Anthony Robinson, East Europe Editor

THE development of east Europe's hitherto primitive service industries is the key to the transformation and growth of the region's obsolescent, production-based economies, according to the Organisation for Economic Co-operation and Development.

It also provides the best chance for expanded international trade and big opportunities for western financial and service companies to export products and know-how, the OECD says.

In a report entitled "Services in central and eastern European countries (CEEC's)" the Paris-based think-tank says the former ideological prejudice against services as "non-productive" has contributed to low overall economic efficiency and a relatively low share of services in GDP.

High on the list of CEEC needs to transform their economies is technical assistance in re-training central bank personnel to cope with new supervisory and prudential regulations and the creation of "independent, strong, efficient and competitive" commercial banking networks. The report notes that the development of commercial banks, virtually from zero, requires people skilled in risk assessment and balance sheet analysis, and will need western technical assistance and heavy investment in electronic banking and communication equipment.

Telecommunications is among the most backward service industries, with telephones per 1,000 people ranging from 118 in Poland and the Soviet Union to 230 in Czechoslovakia and Bulgaria, compared with almost 900 in the most advanced west European societies.

It singles out the development of capital markets, pension funds and different types of insurance products and building societies as areas with large potential for development and job creation.

Poland and Hungary have made the greatest progress in drawing up legislation and creating private banking and other institutions. "The next tasks of financial reform are the development of financial investors/insurance companies, pension funds and savings associations, an integrated money market with a unified interest rate structure and an equity market extended to households," the report says.

While acknowledging the widespread lack of experience in international banking, it underlines the "potential of well-educated people who, properly retrained and motivated, represent valuable entrepreneurship". It warns, however, that "liberalisation is often connected with high or hyper-inflation and persistent market disequilibria inherited from the old system."

President François Mitterrand keeping his balance yesterday during his annual hike to the top of the Solutre Rock in Burgundy. Mr Mitterrand outflanked demonstrators who planned to waylay him on his annual Whitsun "pilgrimage". Mr Mitterrand has climbed the rock – an impressive escarpment from one side but a gentle stroll from the other – every year since 1946 in the company of selected friends and relations. This year he switched the date of his climb to Whit Monday, complaining that the crowds of journalists, admirers and demonstrators had previously spoilt his family outing. The date change foiled the 150 Algerian war veterans who had picked Sunday for their demonstration. Although an ecologist demonstration picked the right day, the protesters arrived an hour after the early-rising president.

Walesa's old comrades lead assault on financial stringency

By Christopher Bobinski in Warsaw

THE Polish government is facing an increasingly uphill struggle to maintain its commitment to fiscal and credit stringency and tight wage controls.

Not only has the Solidarity trade union, which still sees the government as its own, called a day of protest tomorrow against a background of public dismay at rising unemployment and mounting recession, but the government is also expected to come under strong criticism at a special economic debate in parliament on Thursday.

Solidarity's planned work stoppages and mass meetings mark a worsening of relations between the union, under its recently appointed leader Mr Marian Krzaklewski, and President Lech Walesa.

Mr Walesa, the Solidarity movement's historic leader for nearly a decade, views the union's move as a personal affront and has rallied behind the government led by Mr Jan Krzysztof Bielecki, the prime minister he appointed at the beginning of the year.

This support enabled Mr Bielecki and Mr Leszek Balcerowicz, the deputy prime minister and finance minister, to emerge strengthened from last weekend's meeting of senior economists in Warsaw. The meeting had originally been planned to force the government to shift towards more reflationary policies in the run-up to general elections expected this autumn. A 15 per cent devaluation on the eve of the meeting, and a promise to speed up privatisation of state companies, helped to deflect criticism that the government was not responding to changed conditions.

Polish small investors yesterday moved swiftly to buy 900,000 shares priced at Zl 50,000 (£3) each in the Swarzedz furniture factory, this year's first privatisation through a public share offering, writes Christopher Bobinski. The sale is being conducted on a first come first served basis. The entire issue of 2.5m shares is worth Zl 125bn.

Polish brewery, Page 29

But they are unlikely to be enough to satisfy public opinion. The latest opinion poll shows that the electorate is swinging towards despair.

Wage controls which limit pay rises in the state sector to 60 per cent of inflation are the most immediate target of concern. But fears that large sectors of industry are on the brink of closure are depressing the public mood. The prospect of such closures poses the greatest threat to the tight monetary policies agreed with the IMF as a condition for the recent $1.8bn structural adjustment loan. As the pressure mounts, the government will be tempted to tinker with wage controls. It will face the hardest test when pressed to bail out state-owned industries.

Unemployment is expected to rise from nearly 1.4m to 2m by the end of the year and spread from the small towns to the more volatile cities.

The return to work yesterday by 20,000 copper miners in Lubin, south-west Poland, gave the government some relief. The one-week strike was the most serious stoppage this year, with miners demanding a 100 per cent pay rise. But they agreed to return to work after more money was allocated to social funds, to get round wage restraint, and were told they could seek higher wages once privatisation procedures begin this autumn.

Hungary's sell-off hits hard times

Privatisation may come too late for some, writes Nicholas Denton

IT IS only as the privatisation of east Europe's economies has moved from the realm of theory to practice that the daunting complexity of the task has become clear.

Hungary, which has gone farthest in dismantling state control of industry, is therefore finding out first that the transformation is easier said than done. Transactions have to pass through the confusing legal, financial and administrative tangle left by 40 years of communist state control.

One temptation is to cut straight through the knot, by distributing property for free, and without discrimination, to the entire population or to former owners. But Hungary, more than Poland and Czechoslovakia, has opted for the deliberate way: genuinely selling state property rather than just spreading it around.

The decision has its costs. "The process is far more complicated than we ever thought," says Mr Karoly Szabo, deputy managing director of the State Property Agency (SPA); the privatisation agency, which bears the brunt of people's impatience.

"People think that privatisation is just a matter of making an advert: this is for sale," complains Mr Lajos Bokros, the president of the Budapest Stock Exchange and board member of the SPA. In fact, every state company needs extensive legal, financial and organisational restructuring to prepare it for sale, Mr Bokros says. "Very few people know what is involved."

Learning has been painful. Hungary's flagship First Privatisation Programme (FPP), under which the SPA is selling off 20 attractive state companies, is running well behind schedule. When the package was launched last September, Mr Lajos Csepi, managing director of the SPA, expected the process to be complete by the middle of this year. Instead, that is when sales are now scheduled to begin. Pannonplast, a Hungarian plastics company, will be the first to go public next month.

First, the SPA was inundated by interest from western investment banks and other consultants after it made an open invitation to tender for managing the sales. On top of that, several months have been lost, according to one agency adviser, by underestimating the time needed to audit company finances.

Out of the 10,000 shops and restaurants covered by Hungary's retail privatisation plan, fewer than a hundred have been sold

The agency only approached the large international accountancy firms based in Budapest at the beginning of this year. By then the annual financial reports season was already looming.

Overstretched accountants could not take on much of the work. Once they did, audits to prepare a company for sale have been taking as long as six months.

Mr Bokros says the neglect of auditing in the past "was a bad mistake". It has been compounded by the government's reluctance to give the SPA sufficient funding: "Without privatising you have no income; without income you can't get the advisers and privatise."

A company's value is all the more difficult to calculate in economic circumstances which are shifting as fast as those of east Europe. Advisers are selling moving targets. Take Gedeon Richter, Hungary's largest pharmaceuticals company. "Last year we thought Gedeon Richter and companies like that were flagships," Mr Bokros says. But the company has suffered from the insolvency of its important Soviet customers: "Every week its value is decreasing."

Moreover, state property was never organised by the communists with the convenience of privatisation in mind. It is not simply a question of a single, unconstrained authority selling off state enterprises, as in the west. Rather, the government, the SPA, local authorities, enterprise councils and state company managers, have varied and conflicting interests, all of which have to be reconciled.

For example, Danubius Hotels is one of the largest and soundest of the 20 companies in the First Privatisation Programme. It should be among the easiest to sell. But all the company's 18 first-class hotels lie on land owned by the local authority, which is entitled to shares in the new private sector entity. That requires 18 separate and difficult negotiations.

Managing relations between state company managers, who have their own priorities and advisers has also proved more awkward than expected. "There have been serious conflicts sometimes," says Mr Szabo.

Even within the SPA, there is a huge gap in understanding between westerners and Hungarians, which is only being narrowed gradually, according to one western adviser. Nor are government privatisation programmes other than the FPP going any more smoothly. Out of 10,000 shops and restaurants covered by Hungary's retail privatisation plan, fewer than a hundred have been sold, a full four months after the first sales. In Kobanya, a suburb of Budapest, the local state grocery company recently managed to get rid of only one of the eight shops it put up for auction.

Much of the blame attaches to the confusion over land registration, over rules for auctions and for land valuation. "This is a jungle, a real estate jungle," says Mr Erno Racz, an SPA director. He mentions a shop on Budapest's main shopping street whose ownership papers went back no further than five years. The location of another one, by Lake Balaton, was registered as being beneath its waters.

Besides these absurdities, officials and valuators also misjudged the market and set prices too high for what were often only rental rights. "This privatisation is toddling in children's shoes," says Mr Janos Simon, privatisation manager of a Budapest restaurant chain, referring to the catalogue of errors.

Mr Simon has matters in perspective, for Hungarian privatisation is suffering from little more than teething trouble. Officials do not expect to repeat their mistakes.

The SPA claims to have partially privatised over 200 of Hungary's 2,000 state companies. "It is the speediest privatisation in history," says Mr Bokros. The question is whether that is enough. For many companies, privatisation will come too late for survival.

De Benedetti tells court he had no power at bank

ITALIAN businessman Mr Carlo De Benedetti yesterday told a Milan criminal court he lacked power during his two months as vice chairman of Banco Ambrosiano and he did not make a profit on the sale of his stake in the bank, Reuter reports from Milan.

Mr De Benedetti, chairman of computer maker Olivetti, is among 35 people accused of fraudulent bankruptcy in connection with the collapse of Banco Ambrosiano in 1982 with debts of more than $1bn.

Mr De Benedetti was vice chairman of the bank from November 1981 to January 1982, when he sold his two per cent in the bank and resigned. "I was never able to obtain information (about the bank's activities). . . I was not placed in a condition to carry out my duties. I did not have any power," Mr De Benedetti said in his first appearance before the court.

He said he tried unsuccessfully to find out about the operations of the bank headed by Mr Roberto Calvi, which the media dubbed "God's Banker" because of Mr Calvi's links with the Vatican. Mr Calvi was found dead hanging from a bridge over the River Thames in London in June 1982. Investigators have been divided over whether he committed suicide or was murdered.

Mr De Benedetti told the court he sold his shares in the bank in January 1982 for about L54bn ($42m) because it was clear he would never exercise any real power in the bank. "I did not gain one lira," he said.

The Banco Ambrosiano trial, which began a year ago, is expected to last for several more months.

EBRD director takes up his post

THE US executive director for the European Bank for Reconstruction and Development has taken up his position, following confirmation of his appointment by the US Senate, writes Stephen Fidler.

He is Mr William Curran, who from 1970 to 1988 was chairman of First Chicago Limited in London, the investment banking arm of First National Bank of Chicago. First Chicago was known during the period for its close links with east Europe. After leaving First Chicago, Mr Curran acted as a private financial consultant.

The appointment by the US of a banker for the 24-strong board reflects the strong private-sector orientation that the US has been pressing the bank to take.

Poland, Hungary hope for barter

The collapse of trade within the Soviet-led Comecon bloc is fanning hopes in Poland and Hungary that the Soviet Union will allow barter deals and introduce a clearing system to help overcome a crippling shortage of cash, Reuter reports from Budapest.

Both measures could help spur trade devastated by the moribund group's switch to hard currency accounting and world prices this year, officials from the two countries said.

"We have already received information that a draft proposal has been submitted to the Soviet government that would plan to lift the ban (on barter)," said Hungarian trade official Mr Lajos Berenyi.

He also suggested the countries adopt a clearing system that would use the money Hungary pays for Soviet imports to help finance Hungarian exports.

This temporary arrangement could help shore up bilateral trade until the countries get used to the new trade regime.

Both Poland and Hungary have posted large trade surpluses with the Soviet Union so far this year as they continue to buy Soviet energy supplies but find many Soviet customers do not have the money to pay for imports.

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AMERICAN NEWS

Steep fall increases fears that the economy is over-heating

Mexico plunges into $639m trade deficit

By Damian Fraser in Mexico City

MEXICO'S trade position deteriorated sharply to a $639m (£369m) deficit in this year's first quarter; excluding revenues from *maquiladora* (or in-bond) industries the deficit was $1.6bn.

Although capital flows into the country can sustain a deficit of this size, the figures represent a considerable setback and increase fears that the economy is over-heating.

In 1990 Mexico ran a trade surplus of $630m or, excluding *maquiladora*, a deficit of $3.03bn. This in turn was a substantial deterioration on 1989, when Mexico ran a surplus of $2.4bn.

In the first quarter of this year imports grew 37 per cent against the year-earlier period. There was no noticeable difference in the growth rate in imports of capital goods (up 39.5 per cent), consumer goods (37.9 per cent) and intermediate goods (36 per cent). Three-quarters of the growth in consumer goods imports was accounted for by increased imports of sugar, meat, and petrol products.

Over the same period non-oil exports grew 7.3 per cent and oil exports 2.4 per cent. Mexico's Ministry of Budget and Planning said the export growth was boosted by strong performances in the car, chemicals and computer industries.

However, the growth in car exports, and manufacturing exports of which it forms the biggest part, was mainly due to a substantial contraction in the first quarter of 1990 following a strike at Ford.

Mr Rogelio Ramirez de la O of the economic consultancy Ecanal says Mexico will see worse figures for the third and fourth quarters of this year as the effect of the US recession on Mexican exports becomes more apparent. He believes the trade deficit for 1991 is likely to reach $3bn-$4bn, or $7bn-$8bn excluding *maquiladora*.

This would imply a current account deficit of $10bn-$13bn, more than double 1990's outcome of $5.2bn. This year the government redefined the value of worker remittances, thereby reducing 1990's deficit – and subsequent ones – by $2bn compared to previous years.

Menem backtracks on regional aid scheme

By John Barham in Buenos Aires

PRESIDENT Carlos Menem of Argentina has unexpectedly announced plans to revive a scandal-ridden regional development scheme suspended last year.

Mr Menem said during a weekend visit to his home province of La Rioja in the impoverished west of Argentina that he would sign a decree allowing companies locating in poor regions to claim value-added tax rebates on their purchases.

The development scheme, which cost an estimated $800m (£460m) a year in lost tax revenues, became a notorious source of corruption as businessmen and politicians falsified documents to win tax breaks without moving their factories from the industrialised regions of Buenos Aires, Córdoba and Santa Fe.

The scheme was frozen last year under emergency legislation enacted as Argentina recovered from its second bout of hyper-inflation and the government fought to stabilise the economy.

Although inflation has subsided, the government is still struggling to control its finances.

Mr Domingo Cavallo, economy minister, must produce a $800m budget surplus this month and has refused pay rises to pensioners, teachers, health service workers and the armed forces.

Officials could not explain why the president chose to re-establish the scheme.

An Economy Ministry official said: "We know Menem has these ideas, but he has not set a date for signing the decree, which is important."

Commentators suggest the government wants to ease provincial finances in the run-up to crucial mid-term elections in October.

In many provinces the public sector is by far the largest employer and patronage is a formidable political tool.

● Mr Raúl Alfonsín, former president and leader of the opposition Radical party, suffered a reverse on Sunday in primary elections in the cities of Buenos Aires and Córdoba, when moderate opposition candidates defeated his candidates by wide margins.

The defeat could foreshadow further setbacks in provincial primaries to be held later this month.

Policy guru challenges US foreign commitments

By Peter Riddell in Washington

AN unexpected challenge to the US's international commitments has come from Mr William Hyland, one of the high priests of the American policy establishment and editor of Foreign Affairs magazine.

In an article in the New York Times, Mr Hyland argues that the US should start disengaging from abroad and "desperately" needs to take a psychological turn inward.

The nation, he argues, needs "to start selectively disengaging abroad to save resources and seize the unparalleled opportunity to put our house in order. We should avoid new entanglements in the Middle East, withdraw the bulk of our armed forces from overseas and cut back drastically on foreign aid.

"There is no longer a persuasive threat that requires keeping more than 500,000 ground, air and naval forces in Europe or the Far East. Why should Americans pay to defend rich European allies, or spend $800m a year to rent naval and air bases in the Philippines?"

The impact of these remarks is all the greater since they come from a commentator, a magazine and a sponsoring body (the Council on Foreign Relations) which have been among the main upholders of the post-war internationalist and Atlanticist tradition of US foreign policymaking.

The article reflects the current debate not only about the US role in the world after the Cold War and in the light of the Gulf crisis, but also about the relative balance between domestic and foreign policy.

Mr Hyland describes the Gulf War as more of a stimulant to American morale than a guide to the future. "Taking on new commitments in the Middle East and the Persian Gulf while maintaining most of the old ones in Europe and the Far East cannot be justified in face of a disastrous domestic agenda: crime, drugs, education, urban crisis, federal budget deficits and a constant squeeze on the middle class, the backbone of our democracy."

Bush urges free Cuban elections

PRESIDENT George Bush called yesterday for free elections in Cuba and met prominent dissidents on the 89th anniversary of Cuban independence, AP reports from Washington. Mr Bush also demanded that Mr Fidel Castro, Cuban president, free political prisoners and allow the UN to investigate human rights in the country.

US relations with Cuba could improve under specific conditions, Mr Bush said in a radio message.

Collor goes 'soft' on Brazilian business

His new economy minister shows willingness to negotiate, writes **Christina Lamb**

THE abrupt departure of Ms Zelia Cardoso de Mello from the helm of the world's eighth largest economy has shown Brazil's business community in its true opportunistic colours.

Led by São Paulo's industrialists, businessmen have been quick to exploit the "more flexible team" which they perceive has taken over from Brazil's first female finance minister and the young academics who surrounded her.

Despite a continued price freeze, the business community has blatantly raised prices in the past 10 days since Ms Cardoso's surprise departure. They have also called for a return to the high-interest short-term "overnight" financial market abolished by Ms Cardoso. Interest rates shot up to 45 per cent a month. In another indication of things to come, senators from Brazil's north-east, in the committee to approve the new central bank governor, threatened to block the nomination unless the liquidation of their bankrupt state banks was suspended.

Such actions go a long way to explain why businessmen have momentarily forgotten the gloom of a deep recession to greet the appointment of her successor, Mr Marcilio Marques Moreira, a former banker and diplomat.

Inheriting an almost empty ministry (50 people having left), with loudspeakers outside announcing a general strike for May 22, and forced to send police into supermarkets to enforce the price freeze, Mr Moreira may have been wondering why he left the plush embassy in Washington to take the job of Brazil's sixth economy minister in six years.

However, President Fernando Collor de Mello's motives for appointing him have become increasingly clear. Escaping the chaos in Brasília for an official visit to Spain, President Collor took time out from an afternoon jog to tell journalists that the government's new style was "soft" – using the English word.

Moreira: inherited almost empty ministry

Cardoso: abolished 'overnight' market

"Moreira's appointment is a white flag to the establishment," says Mr Walder de Goes, a political scientist at Brasília University. "Collor has discovered that the anti-élite rhetoric so effective for winning elections, in which the poor are the majority, is completely unsuited for running an economy in which the main actors are the élite."

The isolation of the Cardoso team – caricatured as debating abstract theory on what has become known as the "fantasy island of Brasília" – could be sustained only if the government still had popular support or its economic policies were producing results. But they had neither. During the past year the president's popularity has dropped from 80 per cent in favour to 51 per cent against. The economy, meanwhile, shrank 4.6 per cent.

Mr Moreira heads an older, more streetwise team, mostly members of former President José Sarney's government. Mr Roberto Macedo, the new economic policy chief, was 37-year-old Ms Cardoso's teacher. But it is more than just a generation gap. The Moreira team is already showing a new willingness to negotiate.

The task is hardly easy, though Mr Antonio Kandir, the former chief economic policy maker, claims: "We turned the economy round from chaos to a manageable state." There was clear regret in Mr Kandir's voice as, seated in his Brasília flat, where many of the ideas for President Collor's bold stabilisation programme were conceived in March 1990, he watched the furniture being taken away.

"We brought inflation down from 150,000 per cent to 350 per cent, turned a projected public deficit of 9 per cent to a surplus, increased reserves from $5bn to $8bn, ended the financial circus and debt moratorium," he says.

But the current situation of 7 per cent monthly inflation can be quickly undone once the price freeze is lifted and repressed inflation floods back (most industries claim their prices to be 35 per cent below what they in fact are) as well as by the return of $27bn in cruzados seized in an assets freeze last year.

President Collor compared the situation to "winning a football match with five goals but letting in two". Escaping from the freeze and returning to growth without inflation is the biggest challenge for the new minister in a government which has already spent its best bullets.

There is another problem. Ms Cardoso's demise revealed the power of President Collor's kitchen cabinet – the friends and relations from his home state of Alagoas who surround the presidency. They played a powerful back-stage role in Ms Cardoso's removal, the final spark being a public row with Mr Egberto Baptista, the regional development secretary and close friend of President Collor, who Ms Cardoso alleged had passed a decree to benefit his brother.

A new word – "alagoar" – has been invented in the press as a synonym for corruption and last month the construction builders' association publicly accused the government of demanding 30 per cent kickbacks. Some of Ms Cardoso's colleagues hinted that her real reason for resigning was the president's refusal to clamp down on his friends' alleged corruption.

Not only must the new economy minister resist these pressures but the chances of securing a much-discussed social pact seem minimal, with business only interested in prices, workers in wages and Congress (basically a collection of vested interests) pushing to block privatisation and state cuts which slash at their support bases.

Mr Moreira insists the austerity policy will not change, a view echoed by Mr Baptista who stresses: "It was Collor's plan not Zelia's."

Mr Moreira's great advantage is widespread confidence in him. His challenge will be to use this to persuade the Brazilians they must make sacrifices to put the economy back on track.

AMERICAN NEWS

Guyana's policy change draws foreign investors

Canute James looks at a government divestment programme in key sectors of the economy

SEVERAL foreign companies have reacted to a dramatic shift in economic policy by the Guyana government, by grabbing at the opportunity to invest in sectors which the state had decreed should not be in private hands a few years ago.

The decision of Booker plc of the UK and Reynolds Metals of the US to invest in the sugar and bauxite industries, underlines the about-turn which the government of this South American republic has made in its policy towards foreign companies.

Ironically, neither company is new to Guyana. Their operations, and those of several other foreign firms, were nationalised by the government in the 1970s. Both, however, are among several firms buying into state enterprises being divested by a government which, for almost two decades, kept foreign companies out and controlled all sectors of the economy.

The change in the government's attitude has been brought about by a need to earn hard currency and to comply with agreements with multilateral financial institutions which have suggested the divestment of loss-making companies.

The divestment, according to government officials in the English-speaking republic of 900,000 people, can earn the state about $50m.

Mr Desmond Hoyte, the president of Guyana, pointed towards the change in economic policy a year ago when he said that unprofitable state enterprises could not continue to be a drain on the economy, and if not divested, would have to "go to the wall".

The new policy also invites foreign companies to participate in the sugar, bauxite and gold mining sectors – the pillars of the economy.

The invitation to the foreign companies is contained in a document which indicates the scale of the shift in government policy. "It is no part of government's policy to nationalise property," the document says. "The objective circumstances which led to nationalisations during the 1970s no longer exist. The era of nationalisation is therefore to be considered at an end."

Booker plc and the Guyana government have concluded an agreement for the company to take over the management of the state-run sugar industry, which is expected to result in new investments of about $30m in the industry.

Booker plans to convert Guyana's debt to the company of about $7.5m (representing remaining payments for nationalised assets) into equity, and then to raise just over $20m for rehabilitation of the industry.

In the bauxite mining industry, Reynolds of the US and Alcan of Canada are also returning to the country which took over their property. Reynolds is involved in a new mining venture, while Alcan is discussing assistance in rehabilitating mines and other production facilities which it once owned.

The change in the government's attitude has been brought about by a need to earn hard currency and as a result of suggestions from multilateral financial institutions that loss-making companies be divested

Another company which has accepted the government's invitation is Atlantic TeleNetwork, a US firm based in the US Virgin Islands, which has bought 80 per cent of the state-owned Guyana Telecommunications Corporation for $16.5m.

The company has assumed all the liabilities of the local utility, including $10.5m to Northern Telecom which has been upgrading the country's telephone system. While the government has retained 20 per cent of the company, renamed Guyana Telephone and Telegraph, Atlantic Tele-Network will spend about $80m over the next five years in improving the country's telecommunications.

Government officials in Georgetown, the capital, say they hope a similar agreement can be reached with another US company, Leucadia National Corporation of Salt Lake City, Utah, which is interested in purchasing a 60 per cent stake in the local electricity firm. The Guyana Electricity Corporation has suffered from inadequate generating capacity and blackouts in the country have been long and frequent.

The opening of the gold mining sector to foreign companies has led two, Golden Star Resources and Cambior, both of Canada, to investments of $125m to develop what is likely to be one of the largest gold mines in the Americas.

Two smaller state companies have already been bought. Guyana Timbers has been taken over by Colonial Life Insurance of neighbouring Trinidad and Tobago, and Guyana Fisheries has been sold to a joint venture of Japanese and local interests.

Government spokesmen say several foreign airlines, which they declined to name, are soon to start negotiations for buying into the state-owned Guyana Airways Corporation. The officials say although the company has a fleet of one jetliner, it is likely to attract investors because it has route rights to several major cities in South America.

Local businessmen say there is little doubt that the Guyana government has undergone a fundamental conversion in its economic policy, but political change in Guyana is likely to affect the attitudes of prospective investors.

A general election is due later this year. The opposition leader, Dr Cheddi Jagan, an avowed Marxist, has been critical of the divestment of state enterprises, saying it represented "ideological retreat" by President Hoyte's administration, and would lead to businessmen plundering the country.

Dr Jagan, however, is not expected by local business to reverse the divestment programme if he takes office. "It is clear to the opposition as it has become clear to the government that state control cannot work," said one banker. "Selling off state property is no longer a party political issue. It is an irreversible fact of Guyana's economic destiny."

Colombian drug cartel to free two journalists

THE Medellin drug cartel announced it has ordered the release of two kidnapped journalists to persuade the government to end extradition of suspected traffickers, AP reports from Bogota.

The cartel said it ordered Mr Francisco Santos and Ms Maruja Pachon freed.

Mr Santos, the editor of Colombia's largest-selling newspaper, El Tiempo, was abducted eight months ago. He also belongs to one of Colombia's most influential families.

Ms Pachon, a former television producer who is now the director of the Colombian Film Institute, was kidnapped on Nov 9. She is also the sister-in-law of Mr Luis Carlos Galan, a leading presidential candidate murdered by drug traffickers in August 1989.

Neither Mr Santos nor Ms Pachon had appeared by late Sunday. However, it often takes several hours for orders to be carried out in Colombia's underground drug network.

Mr Santos and Ms Pachon were among nine journalists kidnapped by drug traffickers since last year. Five have been released. Magazine publisher Diana Turbay was killed during a failed rescue mission.

In their statement, the cartel said it was releasing Mr Santos and Ms Pachon "to erase any doubt about our pressure over the national constitutional assembly," which is deciding if future extraditions should be allowed to the United States, where many Colombians are indicted on drug charges.

The assembly is expected to vote on the matter this week.

President Cesar Gaviria effectively cancelled the extradition policy in the first weeks of his administration last year.The president offered to prohibit extraditions and reduce prison terms of traffickers if they surrendered to authorities. Three brothers who helped run the Medellin cartel with fugitive Pablo Escobar – Jorge Luis, Juan David and Fabio Ochoa – accepted the president's offer and surrendered.

Since 1984, Colombia has extradited to the United States 46 people accused of drug trafficking.

BUSINESS OPPORTUNITIES

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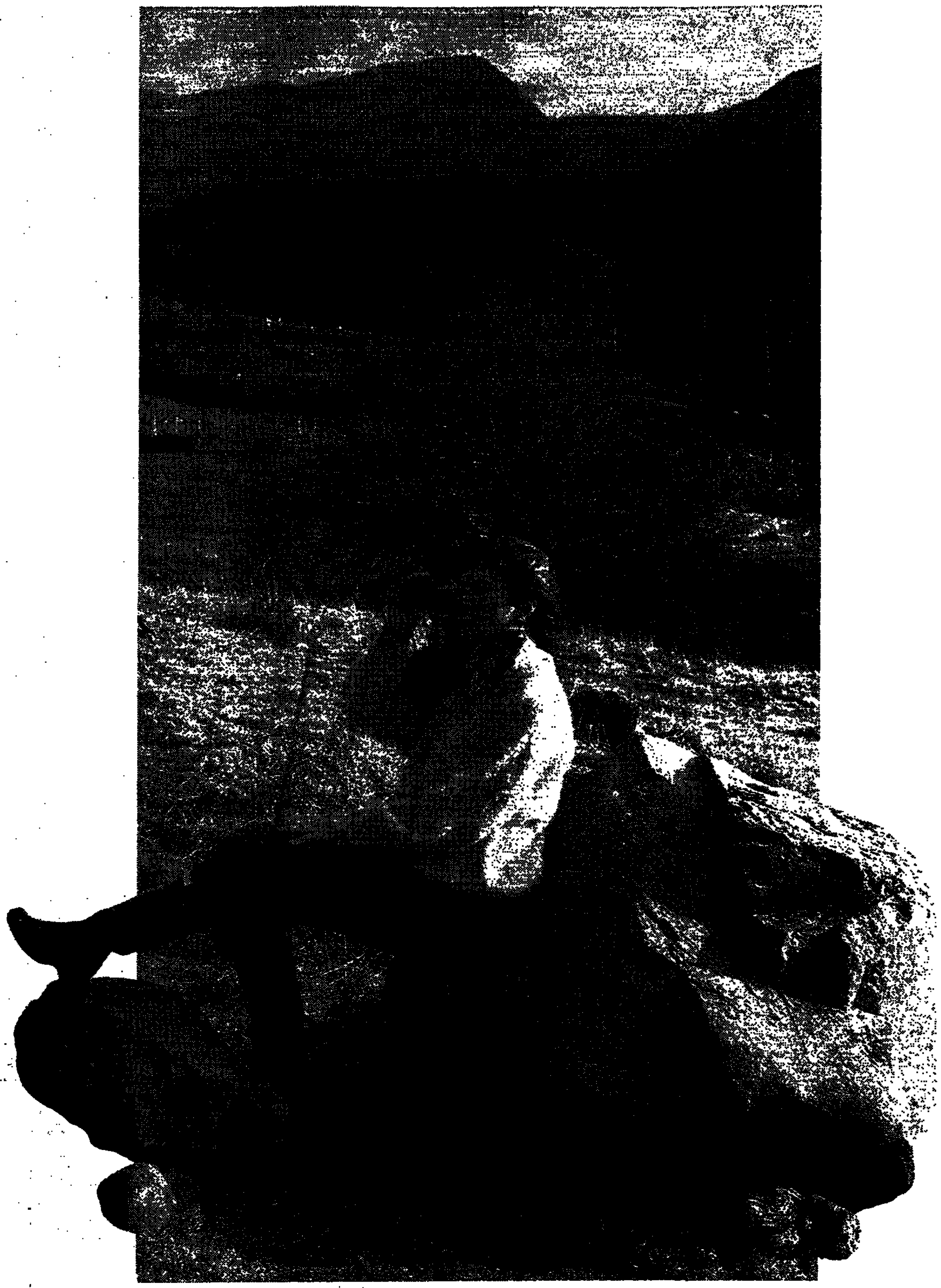
BUSINESS SERVICES

Joan Appleton: a London commuter with her eye on the future.



For Joan Appleton, better trains are part of better living.

As a sales attendant at a world famous West End store, Joan Appleton depends on the London Underground to get her to and from work. She has to be there at nine o'clock sharp each morning. Six days a week.

It's almost an hour from her home in Epping, 25 miles northeast. In a year, that makes over three weeks of travel time. "That's life in this part of the world," she shrugs. "I'm basically an outdoor girl. I love fresh air and open spaces. But if I have to spend that much time underground, I'd like it to be as comfortable as possible."

She and her fellow passengers also appreciate punctuality as much as comfort; trains that run on time and don't get stuck somewhere along the line. Which, as Joan will tell you, hasn't always been the case. Europe's largest urban population is served by the world's oldest metro system, and it sometimes shows.

But that's changing. In a major renewal program, ABB traction technology is being applied in a project led by BREL Limited, ABB's UK associate, to supply 680 cars to London Underground's busy Central Line, enabling faster and smoother operation.

The result will be greater comfort, security and better service for London commuters. And Joan Appleton's underground quality of life will show a marked improvement.

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South Africa reverses land claim decision

By Patti Waldmeir in Johannesburg

THE South African Government has agreed to restore land to some of the 3.5m blacks forcibly removed under apartheid, reversing an earlier decision to reject all claims for restitution.

Mr Hernus Kriel, the planning minister, told a press conference in Cape Town yesterday that an all-party Commission would be set up to adjudicate land claims – a key demand of the African National Congress (ANC).

The decision represents a major climbdown by Pretoria, which had earlier rejected out of hand all claims by families evicted from their homes as part of the National Party's policy of confining all blacks to separate homelands.

The government acknowledged that it had responded to criticism from the ANC and others when deciding to withdraw two bills in its recent land reform package, and table a new one making provision for the Land Commission.

Details of the planned restoration remained vague however Mr Kriel said that the Commission would be able to allocate land currently owned by the state (some of it purchased in order to create separate black homelands).

In addition, the state would purchase a further unspecified amount of land to satisfy claims made to the commission. He declined to say how much land might be involved, though land reform experts said the first category would involve at least 1.25m hectares of land.

Mr Kriel ruled out a blanket programme of restitution. "We cannot give a blank cheque to restore land. We simply cannot afford it financially," he said, but added: "The government is not insensitive to the cause of people or communities who were possibly disadvantaged in the past".

Any such person can take their claim to the commission, which will be appointed by the State President, Mr F.W. de Klerk. He will be free to act on or ignore the commission's recommendations – a feature of criticised by anti-apartheid groups.

Mr Kriel also announced that measures to protect standards in white areas would be softened, with racially discriminatory by-laws to be outlawed.

However white owners of private land would still be allowed to reject black tenants, and local authorities may still be able to pass by-laws which effectively – if not overtly – discriminate by race. Opposition parties in parliament will oppose these measures, which could impede the bill's passage through parliament.

Ruling National Party member Mr Piet Marais, chairman of the parliamentary land committee, said the new proposals were drawn up in consultation with groups and individuals, including the ANC.

Moderate turnout looks likely to help Hindu revivalist party

Surge in violence as Indian polling begins

By David Housego in New Delhi

THE FIRST day of polling in India's general election was marked by unprecedented violence in which at least 36 people were killed and one town in northern India was placed under indefinite curfew.

Turnout in the poll, which covered 204 of the 510 seats being contested, was moderate – a factor that seems likely to favour the more tightly organised, Hindu revivalist Bharatiya Janata party (BJP).

Yesterday's death toll adds to the more than 100 people killed during the campaign – making the election far more violent than the last general election in 1989, when 67 people died during the three days of polling.

Worst hit in yesterday's violence was the town of Meerut, north of Delhi in Uttar Pradesh, which has a long record of clashes between its Hindu and Moslem population. In yesterday's rioting in the town, in which 14 people were killed, shops were burnt and looted and mobs exchanged fire. A curfew was imposed on the town.

Rioting also took place in other towns in Uttar Pradesh with large Moslem populations including Bulandshahar, Sikandrabad and Varanasi (Benares). In Varanasi 50 people were wounded in incidents of stone-throwing and shooting, and in explosions.

Violence was, however, mostly limited to the northern states of Uttar Pradesh and Bihar, and west Bengal and Andhra Pradesh in the south. In Andhra four people were killed and five others injured when para-military forces opened fire to halt a clash between supporters of the Congress party and the local Telegu Nationalist party who were throwing grenades at each other.

As a result of violence and attempted vote-rigging, polling was halted at 41 booths in Bihar, Haryana and west Bengal, and a re-poll ordered.

Election commissioner T. N. Seshan said that, despite the violence, voting had been smooth in most states: "We have been almost entirely incident-free in most places."

Opinion polls, and most political analysts, see former prime minister Rajiv Gandhi's Congress party winning the biggest slice of the 537 parliamentary seats at stake, but falling short of a majority.

Polling took place yesterday in 10 states. The second phase of the poll is on Thursday – allowing troops time to re-deploy – with the final day of voting on Sunday. Those parts of Bihar and Uttar Pradesh which did not vote yesterday will vote on Thursday.

Supporters of the Samajvadi party wield guns outside a polling station in Bulanshahr in Uttar Pradesh

Walesa faces up to Polish war-guilt in Israel

By Hugh Carnegy in Jerusalem

PRESIDENT Lech Walesa of Poland yesterday confronted highly emotive Jewish memories of the holocaust and deep-seated suspicions of Polish anti-semitism during a state visit to Israel.

In contrast with so many modern presidential visits, when attention is on the nuts and bolts of political accords and economic relations, the atmosphere on Mr Walesa's arrival in Jerusalem was laden with more human concerns over a bitter past.

Many Israelis are survivors or descendants of survivors from Poland where some 3m Jews died in the Second World War – the vast majority of the country's Jewish population. Many blame Poles for collaborating against them.

Not long ago, Mr Yitzhak Shamir, the Polish-born Israeli prime minister, whose entire family died in the holocaust, said Poles sucked in anti-semitism "with their mother's milk". During his presidential campaign, Mr Walesa was accused of fanning anti-semitism through remarks that he was "100 per cent Pole" with no Jewish ancestry.

Mr Walesa's response was to come to Israel to face the issue for himself. He was given the platform of a speech to the Knesset – an honour bestowed previously only on Presidents Sadat, Carter and Mitterrand. Referring to Nazi death camps at Auschwitz, Treblinka and Sobibor – all in wartime Poland – Mr Walesa said: "We too were the victims of the Nazis. We helped you as much as we could."

But he also acknowledged the bitter Jewish accusation of collaboration. "Here in Israel, the land of your culture and the land of your revival, I ask for your forgiveness," he said.

In reply, Mr Shamir recalled "the glory" of the Poland of his youth – but also "the humiliating anti-semitism".

More mundane issues were not entirely forgotten. Mr Walesa, apparently hopeful that ties to Israel can help Poland in its efforts to win western economic aid, said he supported the search for a "just" peace in the Middle East and hoped for greater cultural, scientific and economic ties.

Boat people step up rush to Hong Kong

By John Elliott in Hong Kong

NEARLY 1,000 Vietnamese boat people have sailed into Hong Kong during the past three days in the biggest spate of arrivals since June 1989.

The arrival rate this month is more than six times higher than a year ago, and government officials believe that it has been partly caused by serious food shortages in north Vietnam, where rice is reported to be especially scarce.

About 35,000 Vietnamese arrived in Hong Kong during the peak year of 1989. Officials do not expect this year's total to go so high, but there has been a sudden increase recently.

So far this month nearly 3,300 have arrived, compared with just over 500 in the same period last year. The total so far this year is 6,700, up from nearly 2,000 a year ago.

This has sparked fresh opposition among Hong Kong's ethnic Chinese population, who object to the colony being used as a place of first asylum. Two weeks ago legislators voted against fresh funds being allocated to expand detention camps, which are designed to accommodate 54,000 people.

Hong Kong is urging the US to relax its long-standing opposition to mandatory repatriation of the boat people.

Anniversary Tibet wants to forget

Colina MacDougall looks back on 40 years of Chinese 'liberation'

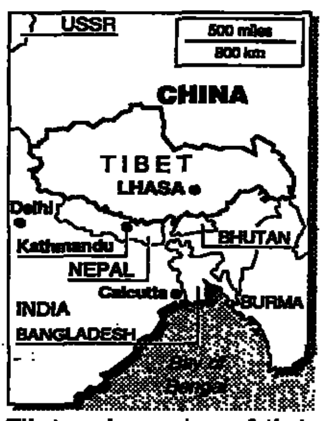
THIS WEEK China celebrates the 40th anniversary of the "liberation" of Tibet. The parties in Chinese embassies around the world will be low-key, since many potential guests have politely declined.

In Lhasa, now overhung by a new Chinese-built 70-metre monument in commemoration of the event, the Chinese have imposed a 22-hour-a-day curfew to keep Tibetans off the streets.

Security men are thick on the ground and foreign journalists have been banned. The Peking media are anxiously countering western coverage of human rights abuses with stories of Tibet's feudal past compared with the peace and progress under Chinese rule.

But it is also the (uncelebrated) 11th anniversary of the visit of Hu Yaobang, the disgraced liberal party leader whose death in 1989 sparked the Tiananmen Square demonstrations. If there were no other evidence, Hu's words in Lhasa (which infuriated hardliners in Peking) would undermine any claims that China's control of Tibet has been beneficial.

Surprised to find how far living standards had dropped under Chinese rule, he called for a commitment from the central government to relieve the people's burdens, and drastic reforms which would "let



Tibetans be masters of their own lives". He also proposed genuine autonomy and the repatriation to China of many Chinese officials.

The failure to implement Hu's proposals and the continuation of China's colonial-style policies led to the Tibetan pro-independence demonstrations of the late 1980s. These have brought tough repression.

As these emotional May anniversaries approach, Peking fears a revival of protest, especially since the world spotlight has since fallen on its behaviour. Paradoxically, the "merciless repression" in Tibet called for in 1988 by Qiao Shi, China's no. 3 leader, has speeded the Dalai Lama's campaign to attract outside attention. This has now succeeded to the point that President George Bush, who previously resisted direct contact to avoid angering the Chinese, accorded the spiritual leader a meeting last month.

This week's festivities are specifically in honour of the signing on May 23 1951 of the "17-point agreement" which in effect annexed the previously-independent Tibet to the People's Republic.

It is surprising that China should want to call attention to the 17 points, to which it has scarcely adhered. The controversial agreement was forced on a Tibetan delegation to Peking, when Chinese troops had already wiped out most of the inexperienced Tibetan army and occupied eastern Tibet (now mainly part of Sichuan province). The Dalai Lama acquiesced in the agreement, fearing the slaughter that would fall on Lhasa if he refused.

The 17 points set out a framework for the future status of Tibet (bearing more than a passing resemblance to the Sino-British Joint Declaration on the future of Hong Kong) which included provisions that Peking would not change the existing political system, alter the status of the Dalai or the Panchen Lamas or compel communist-style reforms. It also guaranteed freedom of religion.

Initially Tibet did get cautious treatment from Peking but this did not last long. The Tibetans in Sichuan resisted the imposition of Chinese policies, and sporadic revolts broke out which ended in the flight of the Dalai Lama to India in 1959. That was swiftly followed by the full absorption of the Tibet Autonomous Region, as it came to be called, into China's centrally-ruled political system.

Famine and violence followed as Tibet was subjected to Maoist policies, notably the Cultural Revolution. Food shortages killed many, and by 1980, only a dozen or so of the region's 6,000-plus monasteries and temples, the repositories of Tibetan culture as well as religion, were left standing.

In the early 1980s, inspired by Hu Yaobang and the nationwide move to reform, Peking did rebate Tibetan taxes, abolish the commune system and give grants for economic development. Some monasteries were repaired, religious practices were resumed and education given a small boost. Tourism increased and, in the rural areas particularly, life improved.

But the move to send home Chinese officials did not materialise. In fact, economic development since has had the reverse effect. Chinese immigration into Tibet soared.

The new jobs in civil engineering, tourism and agriculture have gone to Chinese, not Tibetans, who did not have appropriate training.

Peking is investing yuan 1.3bn (£142m) in projects such as airport expansion and roads, on top of yuan 15bn since 1959. This is not entirely disinterested since, while these projects may be of general economic benefit, they have an obvious use in a strategic border region which is heavily militarised. It is also exploiting Tibet's rich minerals and forestry for use in China proper.

So far, the motive of the Chinese seems to be to maximise Tibet's usefulness more than to benefit the Tibetans. Their public celebration of the 17-point agreement suggests they are unlikely to loosen their grip on this most valuable, if troublesome, territory.

Iraqi secret police still at large

US troops make ready for Kurds to return

By John Murray Brown in Dohuk, northern Iraq

US TROOPS entered the city of Dohuk in northern Iraq for the first time yesterday, to prepare the way for the possible return of the thousands of Kurdish refugees still stranded on the Turkish border or camped in the security zone set up by the allies.

A military convoy led by US amphibious vehicles accompanied a team of US disaster officials and experts from Britain's Overseas Development Administration who moved into this provincial capital to assess the public services, badly damaged during the crushing of the short-lived Kurdish uprising last March.

Dohuk, which is just south of the allies' security zone is considered central to the allies' plans to return refugees to their homes. More than 200,000 come from the city.

One US official estimated yesterday that fewer than 10,000 had so far returned.

After meeting with Iraqi officials, Gen Jay Garner, the US commander,said the city "should present a secure feeling for the returning Kurds". However he said no decision had yet been made for the US to help restore the city's infrastructure.

The Iraqi military has withdrawn three miles south of the city as agreed with the allies. However coalition officials said security was still a problem. Major Julian Baxter, the UK officer represented in talks with the Iraqis, said there was still a worrying number of Iraqi secret police still in the city, perhaps as many as 400.

Iraqi officials are clearly keen to play down the extent of the city's damage. Since reaching agreement over the weekend a number of Iraqi doctors have been sent to the city hospital.

Ten UN guards, patrolling the streets in baseball hats and carrying Smith and Wesson revolvers, were yesterday an object of some local curiosity.

Mr Stefan Demistura, heading the UN mission said the decision to arm the guards was "was useful for psychological and traditional reasons... But the best weapon we have is our blue shirt and our UN flag," he said.

The 10 officers are the vanguard of 400 to 500 UN security men to be stationed throughout Iraq as a confidence-building measure.

Mr Fred Cuny, leading the 12-member US civil affairs team, said he was concerned at the state of water supplies and the number of houses destroyed. On one approach road to the city centre whole streets had been turned to rubble.

Mr Cuny said that perhaps as many as 800 homes had been destroyed.

Allied officials estimate that only half the city's water supply system is working. Food is also scarce, although the UN is bringing in 300 tonnes of provisions.

Mubarak names new defence and foreign ministers

By Tony Walker in Cairo

PRESIDENT Hosni Mubarak of Egypt yesterday announced a cabinet reshuffle that included the appointment of new defence and foreign ministers, but to some surprise there were no changes in the economic portfolios.

The defence minister is Lt Gen Mohammed Hussein Tantawi, 56, veteran of five wars and former chief of operations. He replaces Gen Youssef Sabri Abu Taleb, who held the job for two years but was always seen as a stop-gap.

Mr Amr Moussa, 54, previously UN representative, becomes foreign minister in place of Dr Esmat Abdel Meguid, who was elected Arab League secretary general last week. Mr Moussa is a highly regarded career diplomat who has long been earmarked for ministerial office.

Among other changes was the appointment of Dr Boutros Ghali, formerly minister of state for foreign affairs, to be a deputy prime minister in charge of "foreign relations".

Lagos returns to central controls on banks

William Keeling reports on a plan to help ailing industry and defend the currency

NIGERIA'S banking sector has had a turbulent start to the year, with the government capping lending rates and initiating a fierce liquidity squeeze.

Central bank officials say that the measures were needed to help a troubled manufacturing sector and halt depreciation of the naira, which had fallen 20 per cent in five months. Bankers say the measures mark a return to central control and run counter to the principle of de-regulation, which has guided the government's five-year economic structural adjustment programme.

However central bank officials say that in 1990 banking irregularities emerged which had to be tackled. In the last six months of last year, lending rates rose from 21 per cent to 31 per cent, with a gap of up to 10 percentage points between lending and deposit rates.

As one central bank official noted, "such a wide margin between the deposit and lending rates was not in the spirit of deregulation".

Critics of the banks say that they have exploited deregulation – sometimes illegally – and in so doing are undermining the chances for overall economic recovery.

Bankers argue that while they make use of economic distortions, such distortions are usually of the government's making. An example cited is the differential between official and autonomous exchange rates which bankers have exploited by round-tripping funds, buying foreign exchange at the official market and selling in the parallel market.

A second distortion has resulted from the central bank placing tight credit ceilings on the sector. This had, until interest rates were capped, allowed banks to keep lending rates high in the face of excess demand for credit.

The profit potential of the sector has led to its rapid growth, with the number of commercial and merchant banks rising from 82 at the end of 1989, to about 115, with at least another 30 applicants waiting to join the fray.

The central bank has faced problems both in controlling the extra liquidity each new entrant brings to the sector and in monitoring the professional practices of the banks. As one commercial banker explained, "last year we had something very close to an oligopolistic situation. For instance, the banks effectively pegged their interest rates at a self-determined level."

Hardest hit by the high cost of borrowing was the already depressed manufacturing sector. High interest rates have also been blamed for the low level of new direct investment in the economy. The decision to cap interest rates at 21 per cent was initially welcomed by manufacturers but the measure had an inevitable knock-on effect on the exchange rate.

The naira, which had held steady at about eight to the dollar throughout most of last year, slid to less than 10 to the dollar by mid-March. For the manufacturing sector, which is heavily import-reliant for inputs, the benefits of a lower cost of borrowing were all but wiped out.

The central bank responded by squeezing liquidity in the banking sector and, over a two-week period, almost tripling the amount on offer at the auction.

It also banned 18 banks from the auction for four weeks because they failed to cover their bids with sufficient naira funds. Bankers doubt, however, whether the moves will have more than a short-term effect.

While the naira did appreciate to 8.7 naira to the dollar at the end of March, it has already slipped again to mor than 9 to the dollar. And although activity on the parallel market is subdued, the autonomous exchange rate has remained steady at about 12.5 to the dollar.

Bankers argue that if exchange rate stability is to be achieved, the central bank would do better to fine-tune its auction system. Those banks making the lowest bids currently fail to win foreign exchange which, bankers say, has tended to force up the rate.

The central bank also stipulates that customers on whose behalf the banks bid must not be charged more than an additional one percentage point on the value of the each bank's bid.

With demand for foreign exchange outstripping available supply, those banks which bid highest profit the most.

Bankers say that the central bank has not been receptive to alternative suggestions. As one banker noted, "we told the central bank last year that they should make us sell at a fixed rate above the weighted average of bids. That way those who bid low benefit and those which bid too high will have their profits cut."

Instead, while the intention may have been to limit the excesses of the banking system and to assist manufacturers, the government has adopted an exchange rate exhibiting a large degree of central control. And such a policy has implications outside the banking sector, particularly for manufacturing and agricultural exports, which the structural adjustment programme had tried to promote.

Bankers argue that present government policy is likely to backfire. Many banks are now using subsidiary finance companies to lend funds on, in order to break the interest rate ceiling; and the gap between the official and autonomous exchange rates, currently almost 40 per cent, has increased potential profits for banks which engage in the illegal round-tripping of funds.

WORLD TRADE NEWS

US 'likely to take tough line on China trade'

By John Elliott in Hong Kong

THE US is likely to impose onerous conditions on any extension this year of China's most-favoured nation (MFN) trading status, according to a group of Hong Kong-based US businessmen who have recently held high-level meetings in Washington.

This is a far more pessimistic forecast than had been expected and is causing serious concern in Hong Kong. The colony's viability as a trading and financial centre depends heavily on China's international business, and its manufacturers rely on cheap labour in southern China to process many of their goods.

Estimates suggest that an ending of the MFN status could wipe out up to 2 per cent from Hong Kong's annual economic growth rate, which this year is forecast to rise by 3.5-4.5 per cent.

Some 40,000 to 50,000 jobs might be lost in companies linked with southern China.

Mr Warren Williams, president of Hong Kong's American Chamber of Commerce, said yesterday he had returned from Washington "much less confident" that President George Bush could eventually push through a renewal of MFN without imposing conditions that would be unacceptable to China.

After meetings with senior White House officials, leading congressmen and departmental officials, he realised there was a "deep-seated feeling in all quarters" that China had "done nothing" to earn an unconditional extension.

"In all probability, MFN will not be extended without conditions. That is where my money would go if I was betting on the issue right now. The battle is just beginning to be fought, and it is going to be a battle," said Mr Williams.

Mr Bush has to make his first move on renewing MFN by June 3. He has indicated his personal backing for such a step. But his opponents cite issues such as China's trade surplus, which is forecast to reach $15bn (£8.6bn) this year, Peking's poor human rights record, protectionist policies on intellectual property, export of products made by prison labour and arms sales.

UK may lose part of £400m Brunei arms deal

By David White, Defence Correspondent

A BRITISH deal to supply up arms worth up to £400m to Brunei has been held up for more than 18 months after being agreed by Mrs Margaret Thatcher, then the UK prime minister.

No firm contracts have yet been signed and part of the deal could be lost to German or Italian suppliers.

Mrs Thatcher signed a protocol covering the supply of aircraft and naval vessels with Sir Muda Hassanal Bolkiah Mu'izzadan Waddaulah, the Sultan of Brunei, during the Commonwealth Conference in Kuala Lumpur in October, 1988.

The proposed deal involves the supply of 16 British Aerospace Hawk aircraft, some of which would be two-seat trainers and others single-seat fighters. The sultanate does not have any fixed-wing aircraft in its air force, only helicopters.

This part of the package is estimated to be worth £200m including spares and training. BAe said yesterday it was still counting on completing the deal but contracts had yet to be finalised. The precise mix of trainer and fighter versions had to be determined.

The Southampton-based Vosper Thornycroft shipyard was expected under the government-to-government agreement to supply three Vigilance-class corvettes or large offshore patrol vessels, worth up to a further £200m including support.

The shipyard, heavily dependent on export orders, received a setback last summer when Brunei said it planned to re-open the corvette purchase to international competition. It is understood, however, that no invitations to tender have been issued.

The potential competition would pit Vosper Thornycroft against the rival British yard Swan Hunter of Tyneside, which confirmed yesterday that it was certain to bid if invited. Other yards expected to bid are Lürssenwerft and Bremer Vulkan of Germany and Fincantieri of Italy.

Delays in the Brunei deal echo difficulties over a 1988 British arms package for Malaysia, which dropped a plan to buy Tornado combat aircraft in favour of the cheaper Hawk.

Cairns Group still at odds with EC

By Kevin Brown in Sydney

THE EUROPEAN Community and the Australian-led Cairns Group of agricultural exporting nations within the negotiations of the General Agreement on Tariffs and Trade appeared firmly at odds yesterday after talks in Canberra failed to break down differences over trade liberalisation.

Australian ministers pressed for big cuts in subsidies to European farmers, which the Cairns Group blames for the collapse of the Uruguay Round of the Gatt negotiations in Brussels last year.

However, Mr Frans Andriessen, the EC external relations and trade commissioner, warned the Cairns Group against pressing too hard for changes to the Community's Common Agricultural Policy.

"When you put the stakes too high, you risk not getting what you want to get," Mr Andriessen said after the meeting.

Mr Andriessen said US moves towards "fast track" approval of Gatt agreements indicated that the round could be concluded successfully at the end of the year.

He also said that proposed changes to the CAP would reduce European production, but warned that subsidies would always be necessary within the EC.

Study finds that Japanese consumers pay the price

By Robert Thomson in Tokyo

A JOINT US-Japan study has found that the same German spark plug is four times more expensive in Japan than in the US, that British jam was more than twice as expensive in Japan, and that prices of comparable products are on average 37 per cent higher in Japan.

The study was released yesterday during talks between US and Japanese officials to review progress in the Structural Impediments Initiative (SII), which was launched two years ago in an attempt to remove "structural" barriers to bilateral trade and to reduce Japan's huge bilateral surplus.

A similar price study conducted in October 1989 found that products were 39 per cent more expensive in Japan than in the US, and Mr Michael Farren, the US under-secretary of commerce, said the new results suggest that Japanese consumers pay unfairly high prices and that imported products still face significant obstacles in Japan.

"What you see in these prices is a lack of competition," Mr Farren said. He suggested that the multi-layered Japanese distribution system and the monopolistic tendencies of Japanese corporate groups contributed to the higher prices, which should provoke consumer debate within Japan on needed reforms.

Of the 112 products surveyed by Japanese and US government researchers, 67 per cent were more expensive in Japan, and of the 40 products made in Japan, 12 were more expensive in Japan, including a bottle of *sake*, which was 44 per cent more expensive than in the US. The survey also included 20 products from third countries, mostly European, of which 19 were more expensive in Japan than the US.

US officials want to use the two-day SII talks as an opportunity to press Tokyo for increased monitoring of the allegedly unfair trading practices of the Japanese corporate families known as *keiretsu*. They also want further reforms to the distribution system, and tougher anti-monopoly legislation.

Japanese officials are disappointed by the US response to SII. Mr Koji Watanabe, the deputy foreign minister, began the talks yesterday with a comparison between the numerous changes introduced by the Japanese government and the relative inaction in Washington, which has insisted that the initiative is a "two-way street."

However, Mr Farren defended the US performance, and Washington's failure to keep a promise on reducing its budget deficit was due to the unexpected burden of US savings and loan crisis. He said that promised action had been taken in education reform and export promotion.

● US Vice President Dan Quayle yesterday heard hints from Prime Minister Toshiki Kaifu that Japan might ease its ban on rice imports, officials said, AP adds from Tokyo.

Mr Quayle also pressed for Japan to buy more US vehicles and auto parts, and thanked Japan for its financial aid to the allies' war against Iraq and to Nicaragua's transition to democracy.

A Japanese Foreign Ministry official said Mr Kaifu hinted at a breakthrough in stalled international trade talks by saying Japan would be willing to work out the dispute over its ban on rice imports as long as other countries also worked out their "difficult issues" in the talks.

The trade talks broke down in Brussels last December over agricultural issues. Japanese law bans rice imports on the premise that Japan must be self-sufficient in its staple food. Japan's powerful and heavily subsidised farm lobby says it cannot compete with cheaper rice imports.

UK intervenes over Malaysia power dam

By Lim Siong Hoon in Kuala Lumpur

THE UK government has intervened to unblock the contract for Malaysia's largest hydro power dam, stalled by a dispute over repayment terms between UK financiers and Tenaga Nasional, the project's owner.

Mr Malcolm Ian Sinclair, the minister for state at the British Foreign and Commonwealth Office, met Malaysian officials in Kuala Lumpur last week. But the Pergau project remained in abeyance nine months since its construction and supply contract was awarded to British contractors.

The dispute centres on the privatisation of Tenaga, the electricity monopoly, which raised doubts about whether it qualifies for cheap, and subsidised commercial credit from the UK.

Without the credit, the M$1.35bn ($300m) contract to Balfour Beatty and Cementation, the construction unit of Trafalgar House, is in jeopardy. UK financiers are refusing loans at around the 0.8 per cent interest rate which Tenaga is demanding, offering about 10 per cent instead.

Following Mr Sinclair's visit, however, the Malaysian government was still holding UK to its word for the soft loan, it says, as part of Pergau's construction, supply and financing package. Failure of the deal could have political repercussions in UK-Malaysia relations since Pergau is associated with the heart of improving economic ties.

The contract, the largest received by any UK company, has come to symbolises the revival of British commercial interests in local government contracts withheld during the "buy British last" policy days of the early 1980s.

The present controversy emerged after September 1 when Tenaga's legal status changed from a crown corporation, accountable to Parliament, to a private entity owned, albiet, 100 per cent by the government.

Pergau had been on the pipeline for four years or more, and much the negotiations were carried out before the change.

In return for the construction contract, UK was to provide financing in two tranches: 65 per cent, or about £200m, of the contract value in soft, commercial credit. The balance, called the "UK content," is non-repayable British government grant.

According to one senior manager, Tenaga had the option to combine the two financing elements into a single, apparently even cheaper, commercial loan repayable in 15 years after a five-year grace.

Financing details was to be sewn up within three months of the award so that the entire deal would be readied by December. Completion of Pergau, near the Malaysian-Thai border, is 1996 after 58 months.

It seems unlikely UK financiers were unaware of Tenaga's inpending change; J Henry Schroders Wagg, the UK financial group which acted as adviser, had helped mapped Malaysia's privatisation.

Malaysia seems inclined to view Pergau as a government-to-government deal, insisting that nothing ought to have changed. Tenaga's public sale had been put off twice from December to next March, then May. Tenaga says the postponement was necessary for an independent audit of the group's assets. It has been estimated at around M$11bn, of which a divestiture stake of 25 per cent is plausible, according to one analyst.

Tenaga's annual revenues have risen steadily by around 7 per cent over the past four years to M$3.1bn at last August. But its 1990-91 forecast pre-tax profit is expected to fall from M$870m to M$600m, affecting thus its offer price.

Long-term debt, at M$5.3bn, is 100 per cent of equity though, with yearly capital expenditures expected to double to M$2bn this decade, the ratio could rise.

Tenaga has 4,900 MW in installed capacity and plans to add 3,000 MW, including Pergau's 600 MW, over the next five years. For its previous capital expenditures, Tenaga had relied on inexpensive credit from organisations like the Asian Development Bank.

There is talk now that, while the Pergau deal remains blocked, the contract value has risen by 35 per cent to M$1.82bn

Multinationals warning to Brazil over free zone

By Victoria Griffith in São Paolo

DOZENS of multinationals have threatened to suspend operations in the Amazonian free trade zone of Manaus if the Brazilian government does not raise the area's import quota soon.

"The free zone is experiencing its worst crisis ever," said Mr Ricardo Botelho, spokesman for BASF, Brazil, which manufactures video tapes in the region.

"We may close down our Manaus factory at any moment," said Mr João de Aquino Rotta, institutional director of Philco, the television and video cassette manufacturer.

In addition to BASF and Philco, some 50 multinationals have filed complaints over import quotas with the superintendence of the Manaus free zone, according to Mr Alfredo Nascimento, the organisation's president. The zone has been fighting to maintain viability since the government decided to begin lowering tariff barriers in the rest of the country last year. With Brazil's move to freer trade, Manaus has lost its privileged status as a duty-free area.

"The conditions which made us invest in Manaus are just not there any more," complained Mr Botelho, whose group has put $37 million into its Amazonian factory since 1989. "Lower tariffs in the rest of Brazil have wiped out our domestic sales advantage."

Manaus has also experienced a dramatic surge in labour costs over the last two years. According to Mr Botelho, Amazonian labour was once 40 per cent cheaper than at the company's Sao Paulo factory. Today, it is 20 per cent more expensive. Rising costs led BASF's Amazonian factory to suffer a $15m loss last year.

Hemmed in by stiff competition and high wages, multinationals in Manaus are counting on lower input costs to pull them out of the crisis. They are pushing for an increase in this year's imort quota from $1.2bn to at least $1.6bn. Cheaper materials from abroad, say the companies, will make them more competitive both at home and in foreign export markets.

UK NEWS

Sony to build £147m plant in Wales

by Michael Skapinker

SONY of Japan will today announce that it will build a £147m television factory and research and development centre in south Wales, employing 1,400 people.

The site at Pencoed, Mid Glamorgan, was chosen in preference to Barcelona, where Sony already has a manufacturing site. The plant will complement Sony's 18-year old facility at Bridgend, also in Mid Glamorgan.

The Sony investment will be the biggest in a new factory so far in Wales, exceeding Toyota's £140m engine plant on Deeside or Bosch's £100m-plus alternator plant outside Cardiff, the capital.

The decision to build the factory in Pencoed follows a visit to Tokyo last November by Mr David Hunt, Welsh secretary, and Dr Gwyn Jones, chairman of the Welsh Development Agency, to press Sony to expand its Welsh operation.

The new facility will also carry out research, development and design of new colour televisions, computer displays and broadcasting equipment.

Although the UK has been successful in attracting Japanese television manufacturing investment since Sony built its Bridgend factory, the companies have tended to base R&D in Germany. Sony is expected to announce today, however, that Pencoed will be its leading television research and development centre in Europe.

In opting for south Wales over Barcelona, Sony is thought to have been influenced by the high quality standards achieved at Bridgend.

Minister rejects calls to slow pace of health reforms

By Lisa Wood, Labour Staff

MR WILLIAM Waldegrave, the health secretary, yesterday told the largest group of workers in Britain's state run National Health Service (NHS) that he was not prepared to slow reforms, including approval of more self-governing hospital trusts.

His first big speech since the the outbreak last week of a fierce political row over the reforms was given a lukewarm, rather than hostile, reception by delegates at the Royal College of Nursing's (RCN) annual congress in Harrogate, northern England.

With no sign, however, of any let up in the pace of the pre-election battle between the Conservatives and Labour, the NHS is still expected to be the *subject of clashes in the House* of Commons today between Mr John Major and Mr Neil Kinnock. Ministers said yesterday they are determined to maintain their charge that Labour *had "lied" about the NHS* reforms to win last week's Monmouth by-election.

The reforms are based on a policy allowing state-run hospitals to take control of their own finances by opting out of local authority control.

Mr Waldegrave said it would be wrong to heed calls from organisations, including the RCN, to slow devolution of management to NHS trusts and reforms of NHS finance.

"The uncertainty and confusion would be far worse from the failure of leadership than are the difficulties and strains we face in a swift transition to a new system," he said.

"It would be far worse for health service workers of all kinds if the wholly predictable and predicted uproar at the beginning of the changes we are introducing led us to turn back and leave the service and all who work in it with no sense of direction or leadership at all."

Mr Waldegrave, who has seen the future of the health service emerge as one of the most fiercely contested issues in the run up to the general election, defended the introduction of an internal market in the NHS.

"It is right that we should be *building a system where the* money goes where it can provide most care," he said.

"It is too important to allow ourselves the luxury of wasting anything."

Politicians who promised unlimited money were telling lies, he added.

Professor June Clark, in her presidential speech to the congress, said: "The reality is that the rough discipline of the market is producing unforeseen consequences which are already causing suffering to patients, chaos in the service and great anxiety."

Nurses believed health services were a basic human right, not commodities to be bought and sold in the market place, she added.

Mr Waldegrave announced an 8 per cent increase in student bursaries from September and an extra £3.2m for units pioneering new nursing practices.

Ms Christine Hancock, RCN general secretary, told a press conference Mr Waldegrave came bearing gifts because he knew he was in trouble. But nurses were still angry.

Commenting on claims that at least one London hospital would close because of the reforms, Mr Waldegrave later said: "At the right time, we will, of course, have to intervene and smooth the re-organisation in London to make sure that teaching and research are properly safeguarded."

The government's plans were, however, condemned yesterday by Mr Rodney Bickerstaffe, general secretary of the public service union Nupe, who said that the pay and conditions of health workers were being badly affected by the NHS reforms.

Speaking at his union's conference Scarborough, north east England, Mr Bickerstaffe claimed that changes to employment conditions in self-governing trusts such as the ambulance services of Humberside and Northumbria were damaging the interests of workers.

He said a "Beirut of local negotiations was being put in place of the service". Lincolnshire has declared a pay cut for temporary staff, while Northumbria has offered a 21 per cent rise to emergency crews working 12-hour shifts.

The Nupe conference also called for the TUC to reconsider the abolition of national structures for the trades councils which act local pressure groups for union members.

Pointing the way: William Waldegrave indicates that there is no turning back at yesterday's RCN conference

Radical law would abolish monarchy

By Emma Tucker

A BILL to replace Britain's unwritten constitution with a written version was presented to parliament yesterday by Mr Tony Benn, the opposition Labour party MP and long-time campaigner for constitutional reform.

The bill, which stands no realistic chance of becoming law, includes provisions to abolish the monarchy, lower the voting age to 16, introduce equal representation of women in parliament and end British jurisdiction over Northern Ireland.

Mr Benn said many of the bill's provisions, such as abolishing the House of Lords, disestablishment of the Church of England, and setting up national parliaments in England, Scotland and Wales were already popular across the country.

Mr Norman Tebbit, the former Conservative party chairman, will argue in favour of disestablishment of the Church of England in a television programme to be broadcast today. The Labour party has pledged to abolish the House of Lords.

Mr Benn said he hoped to "build up a head of steam outside parliament" for his bill by sending copies to trades unions, constituency parties and political organisations.

In a speech to the House of Commons, Mr Benn said the debate on constitutional reform cut across party lines. He said people were interested because they wanted parliament to serve them.

His bill would terminate the constitutional status of the Crown and the House of Lords.

London may by-pass EC on green labelling

By Charles Leadbeater, Industrial Editor

THE government will introduce its own scheme of environmental labelling for products unless the European Commission is able to agree by the end of the year on a scheme to cover the whole of the EC.

The decision to press ahead with a British scheme unless the EC reaches agreement reflects the government's mounting frustration with the time it has taken for EC states to agree on common rules for environmental labelling.

The toughening of the government's stance on the issue was disclosed yesterday by Mr *Michael Heseltine, the environ*ment secretary, in a presentation to the National Economic Development Council (NEDC).

The EC initiative on labelling for products has become bogged down in a dispute over how how much information the labels should provide.

The UK is pressing for a label to cover the environmental impact of a product from its manufacture, through its use to its disposal.

Some other governments, however, want the amount of information to be limited to *manufacture and usage.*

The EC proposals, which were presented at the March meeting of EC environment ministers are due to be discussed at further meetings in June and October.

The Confederation of British Industry, the employers' organisation, told the NEDC discussion on industry and the envi*ronment that there were three* difficulties with UK government policy:

- A lack of clarity about public policy objectives particularly on transport and land use;
- Often UK pollution control policies are tougher than those in competitor countries;
- The prospect of sharply *higher electricity prices* would put further pressure on the finances of industries such as steel and chemicals which need to make the most significant polluting industries.

Mr Walter Eltis, the NEDC's director general said the ministers, business leaders and trade unionists attending the council had broadly agreed on the framework of policy on the environment.

He said there was evidence that the participants in the council were increasingly able to establish a consensus on the *practical aspects of issues such* as environment and education policy.

UK increases aid to Africa and Bangladesh by £30m

By Emma Tucker

THE government yesterday announced a further £30m in Britain's aid budget for humanitarian relief in Africa and Bangladesh.

Mrs Lynda Chalker, the overseas development minister, said the increase demonstrated the government's commitment to "providing substantial humanitarian assistance at a time of *unprecedented crises.*"

Since the news of famine in Africa and the cyclone disaster in Bangladesh broke a few weeks ago the government has been defending its record on *overseas aid in the face of* severe criticism from the opposition.

Mrs Chalker said the extra funds brought the total addition to the aid budget for humanitarian assistance this year to £60m.

The bulk of the extra money *will go towards famine* relief in Africa with £20m reaching its target through non-governmental organisations and international agencies. £5m will go to Bangladesh. Details on the remaining £5m were still being worked out.

The opposition Labour party welcomed the addition but said the amount of money given by the government fell far below the 0.7 per cent of gross national product target set by the United Nations.

UK NEWS

Howe urges government to seize lead on Emu

By Philip Stephens, Political Editor

The government was urged yesterday by Sir Geoffrey Howe to seize the opportunity offered by its European partners to play a central role in shaping economic and monetary union (Emu).

The former deputy prime minister said that the draft treaty on Emu suggested earlier this month by Mr Jacques Delors – allowing Britain to defer a final decision on whether to participate in a single currency – meant that the government had now been "offered a choice instead of an ultimatum".

Sir Geoffrey, whose resignation last year over Mrs Margaret Thatcher's approach to Europe provoked her eventual defeat, warned that "a renewed exclusion of Britain from the process of institution-shaping within the Community would be fatal".

In a lecture to the Institute of Fiscal Studies, he urged the government to accept Mr Delors' concession and "leave open for the present the vexed question of whether or not we actually participate in full EMU, whenever that occurs".

His speech came against the backdrop of growing unrest among some right-wing Tory MPs over whether Mr John Major will resist the pressure from Britain's European partners to to sign up for a single European currency.

But Sir Geoffrey dismissed Britain's capacity to veto a move by its partners to establish a single currency as illusory.

There was a tendency in Britain to underestimate the political will behind a single currency on the continent, he added.

If the government sought to halt the Emu process at the present intergovernmental conference, other nations would simply set up a new framework outside the existing EC treaties.

Sir Geoffrey concluded: "My suspicion is that when the time approaches [for Emu], the British people and the British Parliament will not wish to be left behind once again on the margins of Europe".

Major launches policies to revitalise education

By Andrew Adonis

THE prime minister yesterday *launched a series of important* reforms to the education system intended to promote a sharp increase in the number of 16-year-olds proceeding to further and higher education.

Hailing education as "an absolute top priority for the 1990s" Mr John Major, used the launch of the reforms as a platform to regain some of the political initiative and place the issue firmly on the general election manifesto.

An extended system of training credits, a streamlining of vocational qualifications and the removal of post-16 colleges from local authority control are the main features of two white papers (policy documents) issued yesterday. A separate white paper for Scotland proposes reforms to training and higher education systems similar to those planned for England and Wales.

"The country does not have the skilled or motivated workforce that it needs," Mr Major said. He added that a "determination to break down the artificial barrier which has for too long divided an academic education from a vocational one" lay at the heart of the reforms.

The opposition Labour party responded by condemning the plans as failing either to reform or to broaden A-levels, described by Mr Major as "the benchmark of excellence". Mr *Tony Blair, Labour's* employment spokesman, said the proposals "simply perpetuate the irredeemable choice at 16 between the vocational and the academic, which lies at the heart of our problems".

The two policy documents for England and Wales – one on education and training, the other on higher education – include proposals to:

- Remove sixth-form, tertiary and further education colleges, 576 in all, from local education authority control. From April 1993 colleges will be funded directly by the government, through new councils appointed by and responsible to it.
- Abolish the distinction between universities and polytechnics, and establish a single framework and funding council for higher education. Polytechnics will be able to call themselves universities.
- Offer every 16 and 17-year-old leaving full-time education a training credit. Credits are currently available to 10 per cent of school leavers; from April 1993 they will be extended "progressively", and will apply nationwide by the "end of the next parliament". Each credit represents a voucher entitling a young person to buy a training programme leading to a recognised National Vocational *Qualification*.
- Introduce a streamlined and enhanced system of vocational qualifications by the end of 1992, to be implemented by the National Council for Vocational Qualifications.
- Introduce an advanced diploma, to be awarded both to students taking A and AS levels and to those gaining vocational qualifications of the same standard. However, A-levels will remain unchanged: the diploma will be equivalent to two A-level passes.
- Alter the school-leaving age to require all 16-year-olds to complete their GCSEs at the end of the summer term.
- Allow schools to admit part-time and adult students to sixth-forms, and to accept training credits or to charge fees for them.

Mr Kenneth Clarke, the education secretary, told the Commons that the government had set the aim of "mass participation in higher education, further education and training while maintaining and enhancing present high standards".

He added that the government expected one in three of all 18-year-olds to be in higher education by the end of the century.

Editorial Comment and Analysis, Page 16

Shipyard workers stay on strike

By James Buxton, Scottish Correspondent

MANUAL workers at the Norwegian-owned Kvaerner Govan shipyard in Glasgow yesterday voted almost unanimously to continue their 11-day strike. They insisted that the company withdraw dismissal notices which it issued against the strikers last Friday.

Management at the Scottish yard last week raised the stakes in the dispute by telling the 1,600 strikers that it would only take back those workers who accepted a tougher package of pay and conditions than that which they narrowly rejected before the strike began.

It also said it would end an enhanced redundancy scheme which offered large pay-offs to workers who left the yard. Kvaerner Govan said it believed the scheme gave an incentive to "destructive elements" to try "to force the company into a situation where large scale redundancies are unavoidable."

Mr Steinar Dragebo, managing director at the yard, which builds gas carrying tankers, said the company would welcome an opportunity to discuss the dispute with the unions. But no talks were planned.

Mr John Carty, district secretary of the confederation of shipbuilding and engineering unions, said the company's action last Friday had united the workforce with the union officials. Previously the officials had advised the manual workers to accept the terms the company was then offering but 59 per cent of the workers rejected them.

One of the points at issue in an offer which involves pay and working practices over a 21 month period is the company's wish to move from four to five nightshifts a week. It now wants the nightshift to start earlier in the day.

Mr Dragebo has said that despite the £26m investment Kvaerner has made in the former British Shipbuilders yard, the company might have to consider walking away from the yard. "It could be more expensive to go on losing money," he said.

BRITAIN IN BRIEF

Labour calls for scrapping of hard-Ecu

Mr John Smith, the opposition Labour party finance spokesman, urged the government to drop its plan for a parallel European currency as he sought to emphasise his party's commitment to closer European integration.

Mr Smith described the government's plan for a "hard-Ecu" to compete with national currencies as "dead".

Setting out Labour's policy towards European monetary and economic union, Mr Smith said it was reluctant to accept a rigid timetable for the creation of a single currency. It would also insist that a European system of central banks was accountable to governments through the Council of Finance Ministers (ECOFIN).

Sales volumes fall sharply

High street sales volumes registered the largest monthly fall last month since July 1979, following the March spending spree to beat the budget increases in Value Added Tax.

The Central Statistical Office announced that provisional retail sales volumes fell by 3.5 per cent between March and April, to take the annual rate 2.4 per cent lower than last year's levels.

While high street spending remains very depressed, the CSO cautioned against extracting an underlying trend on the basis of two months' highly erratic figures. April's fall was widely predicted after the 3.6 per cent rise in March, when shoppers concentrated or brought forward purchases to avoid paying extra after VAT's rise to 17.5 per cent.

Lex, Page 18

Racing presents financial burden to bookmakers

Britain's biggest bookmaking concerns will be forced to pay more money to the horse racing industry if proposals by the House of Commons home affairs committee are adopted. In recent years, bookies' contributions to racing had been "quite inadequate", according to the committee's chairman, Sir John Wheeler. In turn, the racing industry was sharply criticised for poor management and lack of commercial skills. At present, bookmakers contribute about £37m a year to the industry; the committee wants this bumped up to £50m a year at 1991 prices, starting in 1992-93.

Ruling on Nissan dispute

The legal battle between Nissan Motor, the Japanese car maker, and Nissan UK, its UK distributor, over sales in Britain must be dealt with by arbitration in Japan, Sir Nicolas Browne-Wilkinson, the vice-chancellor, ruled.

Sir Nicolas granted an application by Nissan Motor for a stay on a High Court action launched by Nissan UK, which had sought a declaration that a notice from the Japanese car maker terminating its rights to exclusive distribution in the UK was null and void.

The judge will give full reasons for his decision later this week when he will rule on an application by Nissan UK for an injunction to prevent the distribution deal being terminated pending the outcome of arbitration.

FFV Aerotec cuts 200 jobs

The announcement of 200 job cuts at Manchester airport coincided with an official ceremony to mark the roofing of its new £570m terminal. The terminal will open to passengers in April 1993.

The job losses are being made by Swedish company FFV Aerotec, an aircraft engineering and maintenance company which has operated at the airport for two years. The firm, which has several aircraft service contracts, employs 325 people.

Bank loss may run to millions

The losses at Wallace Smith Trust, the small London bank whose chairman was recently arrested for alleged fraud, may run into the "tens of millions of pounds", according to one of the provisional liquidators.

Mr Tim Hayward of KPMG Peat Marwick McLintock said it was too early to calculate a more precise figure because assets were still being traced.

Mr Wallace Duncan Smith, the bank's chairman and joint managing director, is on bail of £250,000 after being arrested at the end of April and charged with fraudulent trading. Mr Smith is a Canadian citizen and the bank is owned by a family trust.

Gambler falls at first hurdle

A man who gambled away on horse racing more than £3m fraudulently obtained from investors was jailed for four years. Mr Nicholas Young, former executive director of Clark Kenneth Leventhal, an international association of accountancy firms, pleaded guilty to 11 charges including forgery and deception.

While claiming to invest money in offshore trusts, he was actually spending it on a system of horse racing he believed he had perfected while attending Cambridge university in the 1960s.

London upgrade

An effort to raise the quality of life for Londoners will form the centrepiece of Labour's manifesto for the capital.

The opposition party outlined a plan for a new £160m orbital rail line using updated existing track to take passenger and freight train traffic away from the centre of the city. The loop line would have bus and tube interchanges.

TECHNOLOGY

Increase in good vibrations

The arcane world of vibration technology is waking up to the "green effect" as users of heavy equipment begin to realise the importance of cleaning up their act.

For IRD Mechanalysis the green dividend might be thought of more as a comment on the Cheshire hills close to its UK headquarters than as an influence on its business.

But IRD, which in the 1950s pioneered the technique of determining the condition of machines through vibration analysis, has noticed a growing awareness of the environment among clients over the past two or three years.

Jamie Lumsden, IRD's director of European operations, says the trend is really a by-product of equipment users' continuing search for efficiency in increasingly competitive markets.

All rotating machines vibrate, but the way they do so can often indicate that something is about to go wrong. This has underpinned IRD's predictive maintenance technology, which aims to anticipate faults that could lead to expensive shut-downs.

The concept is a sophisticated, objective descendant of the old "threepenny bit" test using a coin placed on its edge to check vibration. Early electronic sensors began an industry which has now gone through several generations of software, and IRD, a US company owned by Dobson Park Industries of the UK, has grown to $45m of annual sales.

The environmental spin-off for IRD has come in a number of ways. Predictive maintenance in industries such as power generation, pulp and paper manufacturing and petrochemical processing could forestall a machine failure which causes the release of oil and a potential environmental hazard. At the same time, vibration technology is an end in itself because it provides an objective test of excessive noise levels.

The environmental effect allows Lumsden to claim that IRD is "green, successful and northern" – a rare combination, especially in a recession.

Andrew Baxter

Loyal fans but mixed reviews

Sematech's role in the US semiconductor industry is again under scrutiny, writes Louise Kehoe

Sematech, the US government-supported semiconductor industry consortium, is preparing long-range plans beyond its original five-year charter. The industry group is expected to seek additional federal funding and to set ambitious new technology goals.

As Sematech lays plans for the future, however, industry members and the US government are assessing its accomplishments to date.

Since its formation in 1987 Sematech has been controversial. The industry consortium represents a radical experiment in US industrial collaboration and raises serious questions about the proper role of government in commercial research and development.

Collaboration did not come naturally to US semiconductor manufacturers. The industry's culture is deeply rooted in the entrepreneurial, go-it-alone spirit of Silicon Valley.

It also went against the grain for US chip makers to seek government support. The same industry executives who lobbied for Sematech in 1987 had told a Congressional panel five years earlier that the government should maintain an "arm's-length" relationship with the chip industry.

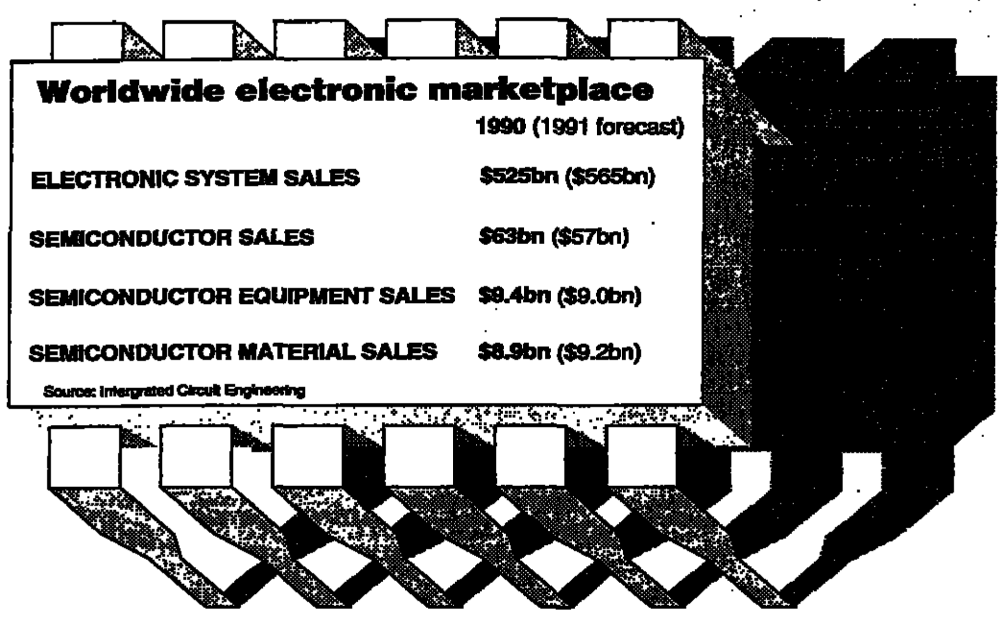
Yet Sematech, a consortium of 14 leading US chip makers which gets half of its annual $200m (£114m) funding from the US Defence Department's Advanced Research Projects Agency, stands as evidence of the radical changes that have been forced upon this industry of individualists.

Faced with mounting competition from Japan, which many saw as a threat of extinction, the top US chip makers banded together to develop advanced chip production processes which they hoped would enable the US semiconductor industry to regain world-leadership in chip manufacturing technology.

Over the past three years Sematech has modified its mission. While it originally set out to build a world-beating prototype semiconductor production plant, the consortium now aims "to provide the US semiconductor industry with the domestic capability for world leadership in manufacturing".

The switch of emphasis is significant. Since 1989 Sematech has focused much of its attention, and budget, upon supporting US chip production equipment companies that make tools for chip manufacturing through joint technology development projects.

Sematech has built the "world class semiconductor fabrication facility" that it promised, but this serves largely as a laboratory for testing new equipment – and as a showcase for visiting dignitaries. This week Prince Philip will have the opportunity to marvel at the gadgetry that makes the chips that power the computers that make the business world turn around.



Worldwide electronic marketplace

	1990 (1991 forecast)
ELECTRONIC SYSTEM SALES	$525bn ($565bn)
SEMICONDUCTOR SALES	$63bn ($57bn)
SEMICONDUCTOR EQUIPMENT SALES	$9.4bn ($9.0bn)
SEMICONDUCTOR MATERIAL SALES	$8.9bn ($9.2bn)

Source: Intergrated Circuit Engineering

Prince Philip's tour guides have plenty of experience. They commonly explain to visiting congressmen and members of President Bush's administration the vital role that semiconductor production tools play in building the foundation of the $565bn world electronics industry.

Washington visitors also hear about the decline of the US semiconductor equipment industry, which dominated the world market 10 years ago but is now struggling against intense Japanese competition.

While Sematech's research and development programme is "on track and on time" according to a government review conducted last year, "the consortium's main benefits to Americans are indirect. They include the economic and national security benefits that come from limiting the potential for cartels in world memory chip production and in key segments of the semiconductor manufacturing equipment and materials industry and the benefits likely to come from the continued operation of commercially vigorous US-based manufacturing firms ready and able to exploit emerging technologies", the panel, chaired by John Betti, under secretary of defence for acquisitions, concluded.

> **'Sematech could meet its objectives and still not restore US semiconductor manufacturing leadership'**

Is that enough? Critics among non-member semiconductor companies say that the consortium is little more than a federal subsidy for a select few chip makers that will do nothing to solve the industry's problems. But they offer few alternative proposals.

Among its members, Sematech's most important contribution is seen in terms of improved relationships between US chip makers and US manufacturers of semiconductor production equipment that enable them to jointly develop more advanced and reliable production tools.

Sematech has created an environment in which chipmakers work closely with equipment manufacturers to test new equipment and willingly share the results of these efforts with other members of the consortium. "It would have been unheard of for Intel engineers to come over and talk about a new piece of equipment, but today it is commonplace," says Charles Sporck, president of National Semiconductor and until recently the chairman of Sematech.

"We believe that it is important for the US to have a viable, competitive process equipment industry," says Craig Barrett, executive vice president of Intel. This is Intel's primary reason for membership of Sematech, he says.

"I am more optimistic about the outlook for the US equipment industry than I was a couple of years ago," said Barrett. "They have made great strides in quality and the communications between the equipment and semiconductor producers have improved." Sematech has played a major role in this effort, he said.

Yet Sematech has not succeeded in stemming the tide of Japanese competition in the semiconductor market, or the market for semiconductor production equipment. In both sectors US companies continue to lose ground.

"Sematech could meet all of objectives and still not restore US semiconductor manufacturing leadership," the federal review panel concluded. Sematech is not enough, industry executives acknowledge.

A new proposal, aimed at establishing US leadership in semiconductor production technology by the year 2000, was mooted last week by the National Advisory Committee on Semiconductors (NACS).

"The semiconductor industry is entering an era where no single company has the financial resources to develop all the manufacturing processes and equipment, and build the factories needed to process chips at the end of the decade," the committee said in an interim report.

Now the NACS faces the difficult problem of shaping a solution. In doing so it may recommend an expansion of Sematech's role. Alternatively, the NACS may seek the formation of another consortium that will more directly address the goals that Sematech originally set out to achieve.

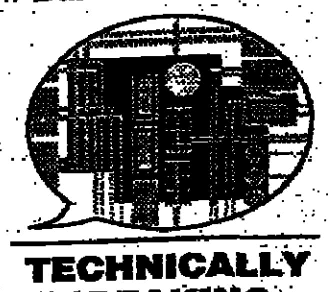
Either approach would inevitably involve government funding and renewed debate over the relationship between government and commercial technology.

Sematech's most significant contribution to the future of the US semiconductor industry may have been to lay the groundwork for more ambitious collaborative projects in the future.

US chipmakers are now far more willing to co-operate among themselves and even the Bush administration's staunch supporters of hands-off, *laisser-faire* industrial policy have come to recognise that government support for semiconductor technology development holds potential benefits for the entire US industrial base.

The world tries to catch Fanuc

By Andrew Baxter



TECHNICALLY SPEAKING

Market shares of 50 per cent or more have often proved to be a dangerous prelude to complacency in western manufacturing companies – stifling technological innovation and encouraging an unhealthy attitude to long-term product development.

These days, however, the few companies that can genuinely claim such worldwide dominance are unlikely to be sitting on their laurels, especially if they are Japanese. Many have reached that position by stepping on to a treadmill where new products increase market share, add to pressure on competitors and finance the search for further innovation.

Fanuc, the world's largest producer of computer numerical control (CNC) units for machine tools, is a case in point. The Japanese company has about 70 per cent of its domestic market, and GE Fanuc Automation, its factory automation joint venture with General Electric of the US, has more than 50 per cent of the US market for CNC units (which use numerical commands to control the actions of machine tools such as drilling and cutting).

The past 20 years have seen a constant search at Fanuc for controls that can give machine tools greater speed and accuracy, with Seiuemon Inaba, the company's founder and president, continuing to provide inspiration for 600 research and development staff – a third of the workforce.

In the circumstances it is hard for Fanuc to let up on the pace of development. In spite of its dominant position, estimated at more than 50 per cent of the CNC market worldwide, there are still technical challenges to overcome.

This was emphasised last week in a co-ordinated worldwide announcement by GE Fanuc, a four-year old joint venture which operates in most of the world and combines GE's programmable controllers and factory automation software with Fanuc's CNC, motors and drives.

Two new developments – a low-cost computer control and the application of reduced instruction set computing (Risc) processors on its top-of-the-range control system – will add to the pressure on GE Fanuc's rivals to compete technologically.

GE Fanuc hopes the new products will further a key aim of increasing its European market share. Siemens still retains leadership of the European market for CNC units, but is being pressed hard by the US/Japanese venture.

According to a study of the EC machine tool sector last year by W.S Atkins, the UK management consultants, European companies have worked hard over the past decade to catch up with the Japanese in the electronic capability of machine tools.

But generally, it says, Fanuc, and to a lesser extent Mitsubishi, have been able to retain their technological advantage due to economies of scale, being further down "the experience curve" and high levels of investment in R&D.

That advantage could now be extended. GE Fanuc is claiming a world first for the application of a 64-bit Risc processor as an option on its Series 15 machines. Faster execution of instructions and greater sophistication will eliminate "servo lag", the difference between the commanded and the actual path of the tool through the work.

The Series 18 is for simpler applications, such as controlling robots that load and unload lathes. It completes a family of GE Fanuc controls and has a narrow-profile display unit which, says Avrell, "is far beyond anything that's around at the moment".

Competitors will be able to make their own minds up about that next month in Paris when the Series 18 makes its debut at the 9th EMO machine tool exhibition.

FT LAW REPORTS

Bank succeeds on war zone claim

THE GOOD LUCK
House of Lords (Lord Bridge of Harwich, Lord Brandon of Oakbrook, Lord Oliver of Aylmerton, Lord Goff of Chieveley and Lord Lowry): May 16 1991

A SHIP'S entry into a prohibited war zone in breach of warranty under its insurance contract *automatically brings the* contract to an end so that the insurance cover ceases. Accordingly, where the insurers warrant to mortgagees that they will advise them promptly if cover ceases, they must do so as soon as they know of the prohibited entry, and do not have an option to wait until they have decided to reject the shipowner's claim for loss in the war zone.

The House of Lords so held when allowing an appeal by the plaintiff, the Bank of Nova Scotia, from a Court of Appeal judgment reversing Mr Justice Hobhouse's decision that the defendant club, the Hellenic Mutual War Risk Association Ltd, was liable to the bank in damages for breach of warranty.

LORD GOFF said that the club was a shipowners' mutual insurance association. It provided protection to Greek shipowers against war risks. It was based in Bermuda and its managers were Thomas R Miller & Son (Bermuda) Ltd.

The insurance provided by the club was governed by its Rules. Rule 20 gave directors power to specify certain places as additional premium areas. If a ship *proceeded* to *such* an area the owner continued to be insured, but was bound to pay an additional premium. During the relevant period the most important additional premium area was the Arabian Gulf.

Rule 25 gave the directors power to prohibit members from going to any "port, place, country, zone or area". Rule 25c provided that "every insurance . . . shall contain a warranty by the owner that all . . . prohibitions . . . shall be acted upon".

Prohibited zones were zones of such extreme danger that it was not considered acceptable that vessels should be covered at all.

In September 1980 the club declared the Shatt Al Arab and Khor Musa a prohibited zone, and the approaches to those places at the Northern end of the Gulf which were directly affected by hostilities between Iran and Iraq.

Among club members in 1980 was the Good Faith group. In 1980 and 1981 its reputation was very good. At the end of 1981 it had 38 vessels. Money had been advanced to the group by various banks. The largest advances had been made by the plaintiff bank.

The primary security consisted of mortgages on the vessels, under which the borrower was left in possession so long as he did not default. He undertook to insure the vessels, and the *insurances were assigned* to the bank. In addition the bank took out a mortgagee's insurance.

The borrower having executed a specific assignment of the insurances on the vessel, the bank then gave notice of assignment to the insurer. A loss payable clause was endorsed on the relevant insurance document, and a letter of undertaking was given by the insurer to the bank.

With regard to the Good Luck, the club, by the letter of undertaking, confirmed that the Good Luck was "entered in this association in accordance with the rules for war risk *insurance", and undertook to* hold the war risks policy to the bank's order.

By paragraph 3 of the letter it undertook "to advise you promptly if the association ceases to insure as aforesaid".

The Good Faith group was in the practice of chartering vessels to Iranian charterers and sending them into the Gulf. Those voyages took the vessels into the additional premium area *and*, when they went into Bandar Khomeini, into the prohibited area.

Good Faith did this without notifying the club and without informing the bank.

Millers discovered what was going on in the autumn of 1981. Neither the club nor Millers informed the bank.

In April 1982 Good Faith started to renegotiate its loans with the bank. The bank was aware that mortgaged vessels were trading into the Gulf, but was not aware that they were doing so uninsured. It did not check the position with the club or Millers.

On April 7 1982 Good Faith chartered Good Luck to Iranian charterers. On June 6, while proceeding up the Khor Musa to Bandar Khomeinei, she was hit by an Iraqi missile and was ultimately declared a total loss.

Good Faith made a fraudulent claim on the club, pretending it had given advance declaration of entry into the additional premium area and that it was ignorant of prohibited areas.

Millers were aware of the probability of fraud and that because the vessel was in a prohibited zone, the club *would not be legally liable* to meet the claim.

The bank completed renegotiating the refinancing agreement, and in the second half of July it permitted Good Faith to *draw down an additional $2.6m* for working capital.

On August 4 the club rejected Good Faith's claim for indemnity in respect of Good Luck, on the grounds that she was in a prohibited area, and was in an additional premium area without prior notification.

At no time before August 5 1982 did Millers or the club disclose to the bank what they knew about the defects in the claim made on the club, or any other aspect of Good Faith's conduct.

The bank claimed damages from the club for, *inter alia*, breach of the letter of undertaking. Mr Justice Hobhouse *held the club liable in damages*. The Court of Appeal reversed his decision. The bank now appealed.

Mr Justice Hobhouse concluded that the strong probability was that if the bank had been told by Millers that at the time of the casualty Good Luck was in a prohibited area and was not covered for war risks, the whole matter of including her in the security would have been handled differently.

He was satisfied that the strong probability was that any value attached to Good Luck would have been put on one side until the situation had been clarified, and that no draw down in respect of working capital would have been permitted.

The judge considered that a wide and businesslike interpretation should be given to paragraph 3 of the letter of undertaking, the purpose of which was to enable the bank fully to protect its rights and security, including evaluation of its security for the past and the future.

He held that entry into a prohibited zone contrary to rule 25 required the club to notify the bank under paragraph 3 of the letter of undertaking. Once a vessel entered into a prohibited zone she was, in ordinary business terminology and in truth, uninsured, and accordingly the club had ceased to insure her within the meaning of paragraph 3.

The Court of Appeal did not agree that entry into a prohibited zone, though breach of warranty under rule 25c, had the automatic effect of bringing the insurance contract to an end. *They said the breach* entitled the club to treat the contract as at an end if it chose, and that it did not cease to insure the ship until had decided whether it would treat *the breach as bringing the contract* to an end.

They supported that reasoning by analysis of section 33 of the Marine Insurance Act 1906. Their analysis was not correct.

Section 33(3) provided that a promissory warranty, by which the assured undertook that some particular thing should be done, was "a condition which must be complied with . . . If it be not so complied with then, subject to any express provision in the policy, the insurer is discharged from liability as from the date of the breach of warranty".

The words were clear. They showed that discharge of the *insurer from liability was automatic*, and was not dependent on any decision by the insurer to treat the contract or the insurance as at an end.

Mr Justice Hobhouse's approach was consistent with the plain meaning of section 33(3). The insurer, as the Act provided, was discharged from liability as from the date of the breach, so that he thereupon had a good defence to a claim by the assured.

As to his construction of paragraph 3 the judge's reasoning and conclusion were correct. Once a vessel entered into a prohibited area she was, in ordinary business terminology and in truth, uninsured and so the club had ceased to insure her within the meaning or paragraph 3. Once the Court of Appeal's construction of section 33 of the Act was rejected there was no answer to his approach.

The appeal was allowed. Their Lordships agreed.

For the bank: Jonathan Mance QC, Julian Flaux and Stephen Kenny (Constant & Constant).

For the club: Stewart Boyd QC, Jonathan Gilman QC and David Bailey (Herbert Smith).

Rachel Davies
Barrister

MANAGEMENT COURSES

LEGAL NOTICES

NOTICE OF MEETING OF CREDITORS
ALPHAS SIRIUS LIMITED

NOTICE IS HEREBY GIVEN pursuant to Section 98 of the Insolvency Act 1986, that a meeting of the Creditors of the above named Company will be held at The National Motorcycle Museum, Coventry Road, Bickenhill, Solihull, West Midlands, B92 0EJ on the 30th day of May 1991 at 11.30 o'clock in the forenoon, for the purposes mentioned in Sections 98, 100 and 101 of the said Act. A list of the names and addresses of the Company's creditors will be available for inspection, free of charge, on the two business days falling next before the Meeting, at Centre City Tower, 7 Hill Street, Birmingham B5 4UU.

Dated this 13th day of May 1991
BY ORDER OF THE BOARD

C N CROUCH
DIRECTOR

GLENFIELD ENTERPRISES LIMITED T/A HYPERION TRAVEL

Notice is hereby given, pursuant to Section 98 of the Insolvency Act 1986, that a Meeting of Creditors of the above named company will be held at 3rd Floor South, Tennyson House, 159-163 Great Portland Street, London W1N 5FD, on Wednesday 29 May, 1991 at 12 noon, for the purposes mentioned in *Sections 99, 100 and 101 of the said Act.* A list of names and addresses of the company's creditors will be available for inspection, free of charge, at the address of the meeting as above on the two business days before the date of the meeting.

Dated this 10th day of May 1991.
By order of The Board.
K.F. Hornby (Mrs), Director.

MCT REALISATIONS LIMTIED (IN RECEIVERSHIP) (FORMERLY MONARCH CARS (TAMWORTH) LIMITED)

NOTICE IS HEREBY GIVEN, pursuant to the Insolvency Act 1986, that a MEETING of the CREDITORS of the above named company will be held at 43 Temple Row, Birmingham on 5 June 1991 at 11.00 am for the purposes of having laid before it the report prepared by the Administrative Receiver in accordance with the said section and, if thought fit, appointing a Committee.

Creditors whose claims are wholly secured are not entitled to attend or vote at the meeting. Creditors who are partly secured may only vote in respect of the balance of the amount due to them after deducting the value of the security, as estimated by them. A creditor in respect of a debt due on, or secured by, a bill of exchange or promissory note *must* treat the liability of any person who is liable on the bill antecedently to the company as a security held by him (unless that other person is subject to a bankruptcy order or in liquidation)

Creditors wishing to vote at the meeting must lodge a written statement of their claims with me at Cork Gully, 43 Temple Row, Birmingham, B2 5JT no later than 12 noon on 4 June 1991. Forms of proxy which, if intended to be used, must also be lodged with us by that time

DATED this 15 day of May 1991

J.F. Powell
Administrative Receiver

CLUBS

LEGAL NOTICES

COMPAGNIE DE SAINT-GOBAIN
Public Company with a capital of F 6.522,662.500.-
Registered Office :
"Les Miroirs" 18, Avenue d'Alsace - 92400 COURBEVOIE
R C S NANTERRE B 542 039 532

PARTICIPATING STOCK APRIL 1984 OF ECU 1000 EACH

As the general Meeting provided on May 15, 1991 for the participating stock owners of ECU 1.000 issued in April 1984 by SAINT-GOBAIN, could not deliberate, missing the quorum, the participating stock owners are again convened by the board of directors in general Meeting as of May 29, 1991, at 11:30 at the registered office of the Company, "Les Miroirs" 18 Avenue d'Alsace in COURBEVOIE (92400). This meeting will enact on the following agenda :

- BOARD OF DIRECTORS' REPORT ON THE COMPANY'S OPERATIONS FOR FINANCIAL YEAR 1990,
- AUDITORS' REPORT ON FINANCIAL YEAR 1990 ACCOUNTS AND ELEMENTS FOR FIXING THE PARTICIPATING STOCK YIELD,
- FIXING THE INCOME OF THE MASSE ENTITLED REPRESENTATIVES,
- POWERS FOR FORMALITIES

To attend the meeting the participating stock owners will have to provide a blocking *affidavit issued by the trustee and in order* to appoint a deputy at the meeting they will have to add a proxy to this affidavit.

The deposit effected and the power sent for the meeting of May 15, 1991 still available for the hereby *mentioned* meeting.

THE BOARD OF DIRECTORS

YARDMYTH LIMITED IN RECEIVERSHIP

NOTICE IS HEREBY GIVEN, pursuant to Section 48 of the Insolvency Act 1986, that a *MEETING of the CREDITORS of the above* named company will be held at 43 Temple Row, Birmingham on 5 June 1991 at 10.30 am for the purposes of having laid before it the report prepared by the administrative Receiver *in* accordance with the said section and, if thought fit, appointing Committee.

Creditors whose claims are wholly secured *are not entitled to attend or vote at the* meeting. Creditors who are partly secured *may* only vote in respect of the balance of the amount due to them after deducting the value of the security, as estimated by them. A creditor in *respect* of a debt due on, or secured by, a bill of exchange or promissory note must treat the liability of any person who is liable on the bill antecedently to the *company as a security held by him* (unless that other person is subject to a bankruptcy order or in liquidation)

Creditors wishing to vote at the meeting must lodge a written statement of their claims with me at Cork Gully, 43 Temple Row, Birmingham, B2 5JT no later than 12 noon on 4 June 1991. Forms of proxy which, if intended to be used, must also be lodged with us by that time.

DATED this 15 day of May 1991

J. F. Powell
Administrative Receiver

PERSONAL

003838 of 1991
IN THE HIGH COURT OF JUSTICE
CHANCERY DIVISION
MR. JUSTICE MERVYN DAVIES
IN THE MATTER OF STRONG & FISHER (HOLDINGS) PLC
- and -
IN THE MATTER OF THE COMPANIES ACT 1985
ADVERTISEMENT

NOTICE IS HEREBY GIVEN that the Order of *the High Court of Justice, Chancery* Division dated the 13th May 1991 confirming the reduction of the authorised ordinary share capital of the Company from £85,945,000 to £26,378,000 and the cancellation of the amount of £12,390,004.91 standing to the credit of the share premium account of the Company and the minute approved by the Court showing with respect to the share capital of the Company as altered the several particulars required by the above act were registered by the Registrar of Companies on the 16th May 1991.

Dated the 17 day of May 1991.

Slaughter and May, (RLH)
35 Basinghall Street,
London EC2V 5DB

Solicitors for the said Company.

COMPANY NOTICES

COMMERCIAL BANK OF LONDON PLC

Holders of Share Warrants to Bearer are informed that they will receive payment of the dividend for 1990 of 32.5p per share on and after 21st May, 1991 upon presentation of the Share Warrant, together with a statement of their name and address, at the office of the Bank, Bankside House, 107-112, Leadenhall Street, London EC3A 4AE. Share Warrants must be left at the Bank for three clear days.

D L HUMPHREYS
Secretary

Bankside House,
107-112, Leadenhall Street,
London EC3A 4AE

In search of successful succession

By Charles Batchelor

A SIZEABLE family-owned dressmaking business flourished under its dynamic founder but was forced into liquidation when he failed to look for a successor in time. Because his own children were too young to take on the business, the founder brought in his nephew, a barrister.

The founder died shortly afterwards and the nephew soon found himself out of his depth. He resisted family pressure to sell because he would not have benefited and several years later took the company into involuntary liquidation.

This example of one of the key problems facing the family-owned business is cited by Peter Leach, a partner of accountants Stoy Hayward, in a new study* of the subject. Clinging to family control is not always to the advantage of the business which may in the long-term benefit from bringing in professional managers.

As Leach's book makes clear, understanding the problems of the family business requires psychological insights as much as commercial expertise. The business may bring the family closer together but it can also serve as a catalyst for its destruction.

For example, a father may consciously want to ease his son's entry into the business while subconsciously proving unable to relinquish control of his greatest source of personal fulfilment. The son, for his part, needs to establish his independence but is made to feel that his own future prospects and the debt he owes to his father require him to go along with his father's wishes.

A first step towards managing this problem is for the family to realise that this is not a conflict which is unique to them but that these basic rivalries affect most of the human race. The interests of both generations may be catered for by establishing a division or a new subsidiary over which the son has autonomy.

Serious conflicts may require a neutral third party to be called in. He should listen to both sides, preside over a discussion between father and son and then help draw up a plan to resolve the dispute.

**The Family Business. Published by Kogan Page. 186 pages. £12.95.*

Supplying the Japanese

Painstaking assessment of production quality

Charles Batchelor on a close but informal relationship

Sit in the offices of a handful of small companies in Wales and you will be struck by the number of plaques and trophies on display. Closer inspection of the contents of the gilt frames reveals a common feature. All have been awarded for good performance by one of the growing number of Japanese companies to set up in the UK.

Hugh Smith, director of the packaging and mouldings activities of Otford Group, based at Abercarn, near Newport, boasts a particularly impressive collection from companies such as Sony, Sharp and NEC.

Looking to diversify out of its original business of manufacturing expanded polystyrene packaging, Otford has in the space of just three years created a £10m-turnover division supplying moulded plastic television cabinets to Sony and Hitachi.

The commemorative plaques and the contracts which underpin them are signs of the growing role which Japanese manufacturers are playing in the UK and the South Wales economy. They also demonstrate that small and medium-sized businesses can meet the tough conditions which the Japanese expect of their suppliers.*

Japanese customers account for no less than 70 per cent of the £17m turnover of Otford's South Wales manufacturing operations. Otford, a privately owned company, employs 250 people in manufacturing.

"In 1980 the packaging business was on the brink of disaster," recalls Smith. "We needed business and the Japanese were there. Something told me they had a long-term future."

After a slow start, business picked up sharply following a visit from one of the Japanese company's engineers, Smith explains. The engineer was apparently impressed by the investment that Otford had made in new machinery. "They saw that as a sign of vision," he says. "They look at the attitudes of management."

The Japanese may start from this impressionistic approach to suppliers but they then go on to a detailed review of the business and a painstaking assessment of product and production quality. Meirion Thomas, an executive director of the Welsh Development Agency, estimates that, unfortunately, just 10 per cent of the 6,000 small and medium-sized companies in Wales are capable of meeting the quality standards demanded by Japanese or other large multinationals.

Ken Vaughan: 'They tell you which way they are going. It gives you confidence'

Alongside its long-running campaign to attract overseas companies to Wales, the agency is now devoting effort to helping local companies improve standards so that they can become suppliers to the incomers.

"Second and third-tier Japanese companies are now looking to locate here," says Thomas. "Some of them are already suppliers to the large companies or are part of the same group. If Welsh companies don't get their act together quickly the Japanese will bring in their own suppliers."

Individual Japanese companies differ in their approach depending on their own corporate culture and the length of time they have been based in the UK but there are sufficient similarities to draw lessons for smaller UK companies attempting to become suppliers.

Close attention to detail often goes hand in hand with a startling degree of informality. UK companies frequently find that they have committed themselves to substantial investments on the basis of verbal promises of business to come their way.

Otford invested £1.5m in plastic moulding equipment with no written guarantee of orders from Sony.

Once a supplier has established a reputation with a Japanese customer, though, the Japanese are prepared to reveal their budgets and plans to allow the supplier to plan his production schedules. Ken Vaughan (pictured), managing director of A McLay & Co, a Cardiff-based printer of instruction manuals for Sony, gets advance warning of Sony's production plans.

"When you build up trust they will give you information on, for example, how many components they will be manufacturing over the next year," says Vaughan. "They tell you which way they are going. It gives you confidence."

But before a supplier can achieve this degree of closeness with his customer he must satisfy him that he can meet exacting quality standards. McLay, which employs 89 people and makes sales of £4m, is required to achieve a target of fewer than 50 "faulty" manuals per million.

One recent monthly quality report which came back showed he had reached 114 faults. "We got our knuckles rapped," says Vaughan.

The faulty manual will be returned so that McLay can remedy the problem. "They don't just demand quality; they give us the tools to do something about it," says Vaughan.

The regular reports from Sony give McLay an overall rating out of 13 and provide a league table to show how the company compares with other suppliers (though the names of the other companies are blanked out).

The Japanese work to their own quality programme, frequently described as "zero defects" and show no interest in BS5750, the main UK quality standard. "We have BS5750 but the Japanese don't recognise it," says Les Porter, sales manager of Harlow Pressings, a Cwmbran-based company with 38 employees and £1.6m of sales.

But quality involves not just meeting demanding standards for the components supplied, it also requires the supplier to meet precise just-in-time delivery schedules. Otford, for example, makes four daily deliveries to Sony.

As Japanese manufacturers have increased the production volumes of their UK factories the timing of deliveries has become even more important and places even tougher demands on their suppliers. Radun Controls, a Cardiff-based supplier of TV remote control units with £1.3m of sales, currently works to a three-to-five day delivery cycle but expects to move to a 24-hour cycle eventually.

One result of these close links between supplier and customer is that it becomes difficult, particularly for a small company, to work for more than one or two customers. "They are so demanding; there would inevitably be a conflict of interest in a company of our size," says McLay's Ken Vaughan. "There would be an extra order and you would have to let someone down."

And while there are advantages for the small company in working so closely with a large customer – Radun has received help with training and in sorting out production problems while Otford was assisted by Sony to develop its plastic moulding technology – there are also potential disadvantages.

"You sometimes feel they make so many demands that it is getting too much," says one UK manager. "We are in danger of being swallowed up. They sometimes forget that you are not part of their company."

"Too much dependence is dangerous," warn Peter Goodall and Max Munday of Cardiff Business School. Despite the generally good record of Japanese companies in treating their UK suppliers, the academics point out that it is not unknown for large companies to exploit their dominance of small suppliers. A particular worry for the Welsh is that the Japanese might decide to move their operations closer to the heart of the European market.

Another development which is starting to concern some people is the request by some Japanese companies for detailed accounting information to enable them to isolate and, where possible, reduce manufacturing costs. "We have been asked for this information," says Harlow Pressings' Les Porter. "Some companies give all the information and suffer. We provide a limited break-down at our discretion."

In the main, though, the small suppliers welcome being treated as partners by the Japanese. The sense of unease that some small companies feel may reflect their past experience of adversarial supplier-customer relationships rather than the present reality. For the moment at least there are many suppliers who are only too happy with the commemorative plaques which adorn their desks.

**See this page, May 17.*

In brief...

■ **Stung by criticisms that they do not understand their small business customers, the banks have been beefing up the training they provide their managers.**

The latest bank to improve training is National Westminster which has linked up with Durham University Business School (DUBS).

DUBS will provide five-day residential courses to nearly 200 NatWest managers this year with emphasis on managers from branches with a high concentration of small firms.

The course will concentrate on the non-financial aspects of a small business including the character of the entrepreneur and the business's overall aims and objectives.

■ **More young people are wanting to run their own business, to judge by the level of applications to take part in Livewire, a privately-sponsored programme which provides advice to 16-25 year olds who are considering self-employment.**

Livewire sent out business planning packs to more than 5,000 people in 1990, an increase of 45 per cent on the year before, while the start-up awards scheme considered 750 business plans from more than 900 people who were considering going into business or whose business had been going for less than one year.

More than 300 entrants shared in £150,000 worth of prizes at a local, regional or national level.

Ominously, the number of applicants who were unemployed increased for the first time in four years. The proportion of manufacturing business-based ideas fell from 18 to 15 per cent while retail business proposals rose from 20 to 23 per cent. Service sector businesses accounted for 62 per cent of ideas.

Contact Livewire, 60 Grainger Street, Newcastle upon Tyne, NE1 5JG. Tel 091-261 5584.

■ **Companies which need frequent reports on the financial health of other businesses usually sign a subscription agreement with one of the many business information and credit reference organisations. But for the company which only needs the occasional report Dun & Bradstreet International has launched a one-off service called Reportline.**

Reports on individual UK companies cost £47. Most continental European reports are priced at £70 while North American reports cost £90.

Contact Ray Alabaster, Dun & Bradstreet, Holmers Farm Way, High Wycombe, Bucks HP12 4UL. Tel 0494 422000.

■ **A compendium of government successes in reducing red tape would, in the view of many businessmen and women, be only a slim volume. The seemingly inexorable growth in the amount of regulation governing business appears to mock official attempts to reduce red tape.**

Undaunted, the Department of Trade and Industry, has produced a 28-page booklet* listing some of its recent successes in cutting back bureaucracy.

They range from the simplification of VAT procedures for imports to the introduction of competition – and the reduction of costs – to the vetting of National Health Service suppliers.

More important than past successes is a list of contact numbers of the deregulation sections in 16 government departments, including the Inland Revenue and Customs and Excise.

If your business plans are being held back by government requirements then take up the matter with the department concerned, the DTI urges.

Cutting Red Tape For Business. Available from DTI, Deregulation Unit, 1-19 Victoria Street, London SW1H 0ET. Tel 071-215 4578/4567. Free.

■ **Jim Wallace, MP for Orkney and Shetland and Liberal Democratic spokesman on small businesses, has been named politician of the year in a small business awards scheme, the Guildhall Helping Hands Awards, for his campaigning activities.**

Winner of the special award for services to small business was Chrissie Webber of CD Consultants. Webber launched and runs the women's enterprise centre of West Glamorgan Enterprise Trust. The awards are made by the National Federation of Self Employed and Small Businesses and Tollit & Harvey, a stationery manufacturer.

BUSINESS OPPORTUNITIES

READERS ARE RECOMMENDED TO SEEK APPROPRIATE PROFESSIONAL ADVICE BEFORE ENTERING INTO COMMITMENTS

INVESTMENT OPPORTUNITY TO PURCHASE U.K. RESIDENTIAL PROPERTIES AT APPROXIMATELY 50% BELOW CURRENT MARKET VALUE

We have hundreds of elderly homeowners wishing to sell their property in *return for a life time rent free tenancy.*
This opportunity would interest Investor/Investors with £1 million or more to invest.

Write Box H8125, Financial Times, One Southwark Bridge, LONDON. SE1 9HL

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WANTED - FOR CASH
Manufacturer of Aluminium and UPVC windows, patio doors and low rise curtain walling.

Turnover must be in excess of £5m.

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Electronics Business Required by Investor

Do you wish to sell your electronics manufacturing business? We have a client interested in acquiring a *small/medium* sized company with design / manufacturing capability.

Fax outline to: 0223 837426

BUSINESS WANTED

WANTED INJECTION MOULDING COMPANY

A liquidated or retiring company with 3 to 5 machines, 90 - 200 Ton Lock. Any Machine considered, A in-house product and customer base would be beneficial.

Apply For Further Details To: PENN PLASTICS LIMITED, Tweedbank Industrial Estate, GALASHIELS, TD1 3RS. Tel No: 0896 3458, Fax 0896 2690.

QUOTED BUSINESS REQUIRED

Location South of England. Cost £10m - £20m. Deal by cash injection for 29.9% and management control, or full offer and placing above 29.9%. Principals are experienced businessmen with strong institutional backing. All types of businesses considered but package could suit retiring owners. Serious agents welcomed.

Write Box H8638, Financial Times, One Southwark Bridge, LONDON. SE1 9HL

ESTABLISHED BUSINESS GIFT COMPANY

seeks a marketing or manufacturing company with relevant products or customer database.

Replies to: The Managing Director, Impakt Stationers Ltd, 7/9 Heathmans Road, London SW6 4TP

Business Wanted

Precision Engineering Mid Wales

Write Box H8626, Financial Times, One Southwark Bridge, London SE1 9HL

WANTED:

Midlands/South Yorks Eng. Co. OWN PRODUCT Turnover £1-2 Million

Write to: Box H8640, *Financial Times,* One Southwark Bridge, London SE1 9HL

WANTED

Courier/Despatch companies.

Reply with details to Box No: H8613 Financial Times, One Southwark Bridge, London SE1 9HL

HOTELS & LICENSED PREMISES

On the instructions of Barclays Property Holdings

ODIHAM HOUSE bph

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Purpose built residential hostel accommodation *constructed about 16 years ago for Barclays Bank plc* and now surplus to requirements

Suitable for continued hostel use or for hotel or residential development. 175 bedrooms with 279 beds. 5 flats. Bar. Dining room for about 100. Lounge for up to 100 and capable of division into three. 2 study rooms. Large games room. Sick bay. Site area about 1.6 acres. Car parking for 28.

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Knight Frank & Rutley 071 629 8171 Ref: MSK

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17 Double Bedrooms 100% occupancy for 3 years. Occupied by Local Councils. Net Profit £60,000 p.a. Leasehold. Central Heating. Fire Alarm: Lift. Superb Condition and excellently run. Sale price £200,000.00. Will consider delayed consideration of up to £150,000.00 STS.

Tel: 071 221 3024 Mr Richardson

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- 12 Executive Offices all in Santos Rosewood
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- 5 Conference Rooms
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- 532 Chairs
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Magnificent Leather Seating Reception Area Suite.

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Size: 6'10 x 4'2" overall R.R.P. £12,000 Offered at £6,000.

Contact Christopher Braun, English Period Interiors, 32/36, Hanover Street, Liverpool, L1 4LN. Tel: 051-709-4643.

WANTED OFFICE FURNITURE

All Quantities of surplus modern furniture required for immediate purchase. Best prices paid for right quality. Call Quadrant: 071-731 8834

BOARDROOM TABLE

Public Company Receivership Sale
Victorian Light Oak
14ft x 4ft 8" (contracts to 8ft x 4ft 8")
Quick Sale £3750 (trade value) including 12 chairs

Call 0844 54381

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SE440 (V16) telephone system configured : 56 exchange lines, 336 extensions, with 2 consoles. Configured : 56 Exchange lines, 336 extensions, with 2 consoles. Configuration can be altered to suit requirements installation and maintenance can be arranged offers invited.

Telephone: 071-371 5889.

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Knobs & Knockers™

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- ☐ Well established nationwide presence.
- ☐ Quality ranges of home accessories, typically made of brass.
- ☐ Annual turnover of £7.5m.
- ☐ 51 prime High Street locations and franchises.
- ☐ 9 concessions within department stores.
- ☐ Well equipped office and warehouse accommodation comprising 18,000 square feet.
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For further information please contact Jamie Smith, Sandy Brown or Paul Wills at the address below.

Friary Court, 65 Crutched Friars, London EC3N 2NP.
Tel: 071 936 3000. Fax: 071 480 6881.

Member DRT International

Authorised by the Institute of Chartered Accountants in England and Wales to carry on investment Business.

DeVlieg Machine Company Limited

(In Creditors' Voluntary Liquidation)

The Joint Liquidators, J.K.R. Jones and A.M. Menzies invite tenders for the assets of the machining centres division, formerly known as Wadkin Machining Centres.

The assets for sale comprise:-
- 16 machining centres in work in progress.
- Spares stock.
- Machine drawings and relevant interface logic software.

Tender documents (including conditions of the tender offer) can be obtained from Andrew Menzies or Ken Jones

ROBSON RHODES

Centre City Tower, 7 Hill Street, Birmingham B5 4UU
Telephone: 021-643 1936. Fax: 021-643 4993
Authorised by the Institute of Chartered Accountants in England and Wales to carry on investment business.

FOR SALE ELECTRONIC COMPONENTS COMPANY

A well established business supplying the professional, industrial and defence markets. The company both imports and manufacturers passive electronic components. Turnover is in excess of £4 million.

Interested parties should write for further information to: Box H7994, Financial Times, One Southwark Bridge, London SE1 9HL

UNUSUAL OPPORTUNITY

A division of a company for sale as an ongoing concern, as main company expanding in other directions.
The division available comprises 15 retail shops selling greetings cards and gifts, locating in Northwest, presently managed by one branch supervisor and overseen by one part-time director.
Included are prime position leases, 2 freeholds, fixtures etc and stock in all branches. Very simple but efficient ordering system and control resulting in lowest costs and high gross profit. Overheads are minimal as no warehouse or transport except supervisors car. The whole division can easily be run by a purchaser allocating a small office and one senior manager whom we could train. The deal is for the complete division with no creditors. Project nett profits £240,000. Negotiations on £1,400,000.

Write Box H8646, Financial Times, One Southwark Bridge, London SE1 9HL

TRAVEL AGENCY
FOR SALE - South Humberside
£1.2 million Turnover

Excellent staff includes Manageress and Accounts Clerk. Profitable balance sheet. Reason for sale owner retirement.

Price £120,000

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Manufacturer/distributor of small range of unique, established home/personal DIY security products. Substantial buyer could realise huge potential. Turnover £600k, excellent margins.

Principals only write Box H8649, Financial Times, One Southwark Bridge, London SE1 9HL

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This company, based in the South of England since 1972, is no longer a good fit in the Group, mainly due to size and product range. It would be very useful to an existing industrial flavour and essence business as an ideal bolt-on. *The sale includes the long-standing customer list with good record of* payment. Stock at cost, equipment together with formulae and customer records. This business has an annual turnover of approximately £250,000 and maintains a gross margin in excess of 50%.

Principals only need apply.

Write Box No: H8644 Financial Times, One Southwark Bridge, London SE1 9HL

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Est. 1953. Quality approved supplier to UK largest mining equipment conglomerate, approved supplier to probably the worlds largest compressor manufacturer, also committed on satellite antenna production. Oct 1990 balance sheet sales £741,000. GP £235,000. Nett £61,000. AP £276.000. 20000 sq.ft. 60 year leasehold premises. 2 miles M1 Nottinghamshire. Founder past retiring age, offers 60% shareholding or 100% takeover. First consideration given to concerns intent on expansion.

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Medium sized Manufacturers and Installers of Architectural Aluminium Products with FULL ORDER BOOK interested in expanding current operations to cope with excess sales. Anyone interested in possible merger, acquisition and / or disposal of related companies or operations please write to

Box H8611, Financial Times, One Southwark Bridge, London SE1 9HL.

Specialist Machine Tool Manufacturer For Sale

Located in the West Midlands with freehold premises of 19.000 sq ft and a workforce of 35. Turnover £1,100,000.

Associated machine tool service business with annualised turnover £500,000 also for sale.

All interested parties contact: Harris Watson Services Ltd, 12 St Paul's Square, Birmingham B3 1RB
Tel: 021-233 9700
Fax: 021-233 9707
Principals only

URGENT SALE REQUIRED

TUNBRIDGE WELLS MAJOR DEALERSHIP PREMISES 12,000 SQ.FT. SUPERBLY FITTED SHOWROOMS - WORKSHOPS ONE ACRE FREEHOLD/LEASEHOLD

KEITH CARDALE GROVES 0825 765066

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1 IBM Dealership PS2 & RISC 6000 VAR
2 Computer Maintenance company

Write to Box H8578, Financial Times One Southwark Bridge, London SE1 9HL

FOR SALE

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Principals only please apply. Write Box H8579, Financial Times, One Southwark Bridge, LONDON. SE1 9HL

PLUMBING & HEATING MERCHANTS BUSINESS FOR SALE - HERTFORDSHIRE

Turnover £3/4 M, Leasehold 8,700 sq ft @ £3.70, offices, showrooms, warehouse, yard. Established 8 years. Sound customer base, good potential. Must sell - any offers. Write Box H8632 Financial Times, One Southwark Bridge, London SE1 9HL

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NW London manufacturing Company is seeking to acquire additional product ranges

- Profitable or unprofitable
- Min 4000 sq.ft. for relocation
- Retain staff/management
- Acquisition, equity or JV

Principals only to Box H8635, Financial Times, One Southwark Bridge, London SE1 9HL

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On the instructions of the Joint Administrative Receivers of
LOWNDES QUEENSWAY GROUP LIMITED
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EDINBURGH STEVENSON ROAD 25,000 sq ft FREEHOLD *	GATESHEAD TEAM VALLEY 30,100 sq ft LEASEHOLD	GLASGOW DARNLEY 21,750 sq ft LEASEHOLD
HARLOW EDINBURGH WAY 54,500 sq ft FREEHOLD *	HOUNSLOW HIGH STREET 23,150 sq ft LEASEHOLD	LEEDS AIRESIDE CENTRE 30,500 sq ft LEASEHOLD
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For further information contact the Joint Administrative Receiver, Tony Thompson, KPMG Peat Marwick McLintock, Norfolk House, 499 Silbury Boulevard, Central Milton Keynes MK9 2HA.
Tel: 0908 661881 Fax: 0908 664363.

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For further information contact the Joint Administrative Receiver, Ian Chisholm, KPMG Peat Marwick McLintock, St Nicholas House, 31 Park Row, Nottingham, NG1 6FQ.
Tel: 0602 483444 Fax 0602 483401.

KPMG Peat Marwick Corporate Recovery

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For further details please contact Mr Glen Beveridge, Grant Thornton, 28 Kenwood Park Road, Sheffield S7 1NG.
Tel: 0742 553371
Fax: 0742 500294

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For further details please contact; D M Middleton or G S Goldie, Joint Administrative Receivers, Cork Gully, Hadrian House, Higham Place, Newcastle upon Tyne, NE1 8PB Telephone 091 230 5599, Fax 091 230 5993, Telex 887474 or I.D. Lester, Quality Pipework Services Limited, Oakesway, Hartlepool Industrial Estate, Hartlepool, Cleveland TS24 0RE Telephone 0429 869511, Fax 0429 861960

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Cork Gully

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- South Normanton, Derbyshire, 2 phases, 76 plots on 5.9 acres.
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For further details please contact the Joint Administrative Receivers: Edwin Antill or Allan Griffiths, Grant Thornton, 1 Westminster Way, Oxford OX2 0PZ.
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Respectable Wedding

SCHAUSPIELHAUS, BONN

Brecht liked to have it both ways and never tired of weddings, traditional rituals just asking for parody while every gram of romance is being squeezed out for theatrical stardust. There are mock-marriages in *Drums in the Night*, *The Good Woman of Setzuan* and most famously *The Threepenny Opera*, set in Soho with wedding gifts looted from Selfridges.

The one-act *Respectable Wedding*, written in 1919, predates all these. A young couple celebrate their wedding in a flat whose furniture has been fondly made by the groom. In a series of comic coups, the place gradually falls apart: chairs lose arms and legs, door handles fly off, tables collapse, cupboards refuse to open and get kicked in, the loo floods. In parallel, the superficial harmony between the guests is revealed as a mask for self-interest, lechery and hatred.

Anselm Weber pulls slapstick and psychology together with effortless sleight of hand. The most eligible guest gets a splinter up his bum which gives the bride a chance to touch him up and eventually remove his trousers. Another guest tries to mend the table but instead explores the *stockinged legs trapped* beneath it. There are arabesques of embarrassment when the parents discover the bride is pregnant and a couple who have just met slip outside for a spot of noisy sex, the *remaining guests squabbling* madly over the cream pudding to drown the din.

Fine character playing dramatises the shoddiness of apparent respectability. Wolfram Koch is the upright best man croaking sweet-nothings in the ear of the bride; Iris Erdman simpers as the mother-in-law but turns into a tribal matriarch when the going gets tough; Ingrid Schaller's wedding guest is all outraged propriety until her husband tears off her wig and shows the jealous hag behind the politesse.

This is radical idealism rerun as social comedy, Brecht played as Ayckbourn though, as Ayckbourn has said of his own work, there's politics in every line. But there's optimism here as well as a cry for a less hypocritical social order; Brecht's emotional hooligans are always lovingly flawed rather than chilling and this ill-matched pair (Alberta Schatz and Michael Lucke) patch things up in the ruins, drunk on the dregs from left-over glasses as they pant to sleep together in a bed still to be built.

Love on a shoestring: romance hanging on by its fingernails in a material world; tentative anarchy: Brecht wrote the piece before he had read Marx and gave it its sarcastic title (in German "Die Kleinburgerhochzeit") afterwards. It is a rarely performed work; Weber's production is relaxed, crisp in comic detail, varied in musical diversion ("Here comes the bride" to a smoky Latin guitarist), upbeat while never letting slip the brittle nostalgia of the best early Brecht.

Jackie Wullschlager

Exotic but unloved

Patricia Morison lauds ethnic art

Conservator Ray Martin at the Brighton museum with the masks from New Ireland, New Guinea

Ethnography has something of an image problem these days. Exotic yet unloved, it has to be brought in from the cold with a few blockbuster exhibitions so that at long last the public will begin to appreciate Britain's enormous and superb collections of non-western art. Who thinks of Eskimos in connection with Nuneaton? Who associates Maidstone with a fabulous Pacific and North-Western American collection? A good deal of nonsense is talked about the so-called treasures languishing in museum basements, but in the case of ethnographic collections, often by their nature extremely fragile, the grumble is nearer the mark. Priceless, or at least irreplaceable, collections shipped back by hundreds of colonial administrators crumble away, uncatalogued and unseen.

Part of the problem is the word ethnography, with us since the 1830s. Many people have not a clue what it means and those that do often associate it with Victorian racist scholarship and the ethically dubious methods of professional plunderers. So it is not surprising that museum people will often say that non-European art is not "popular". And yet, need that be true? This is, after all, the year of *Dances with Wolves*. Surely a blockbuster exhibition on native American art staged now could prove a howling success.

A fascinating afternoon in Brighton showed me what we are missing. Few people, not even specialists, know that the Brighton Museum, opposite the Royal Pavilion (tel 0273-603005), owns one of Britain's richest collections of non-Western art with some 12,000 items. The Brighton collection now has a new curator of ethnography, Anthony Shelton, who was astonished to discover quite what riches the collection holds. Unfortunately, the museum is typical in that at present the public sees only the tip of the ethnographic iceberg.

Nor, as Shelton admits, is that tip an alluring prospect. The permanent exhibition looks like a redundant aquarium. Nothing appears to have changed since the 1960s. The gallery is painted dark brown, and the African section has a fake leopard-skin background. And yet, within such Stygian surroundings the visitor prepared to crouch and peer will spot some good things, such as the Sri Lankan "curing screen" with its horrible personifications of Disease.

Nor could anyone miss the magnificent winged shark from New Ireland, an island in the Bismarck Archipelago which is now part of New Guinea. The delicately striped monster commemorates an actual event when a brave fisherman had his leg chewed off by a shark but managed to kill the brute and, thanks to a ritual song-and-dance, survived his wounds. The sculptor has represented the heroic fisherman as a tiny figure attached to the mouth of the terrible air-borne fish.

New Ireland masks, or malanggans, were made to repose in ancestor shrines and are extremely rare and fragile. As Shelton explained, curators regard themselves as lucky to own even one; he was thrilled to find that, unknown to the scholarly world, the Brighton collection has 15. The shark apart, they have not been on display in years. However, at least they have now reached the conservation department – thanks to the special needs of the Royal Pavilion, Brighton Museum has a staff of ten conservators. Their skills are thoroughly taxed by these complex masks which mix pith, grass, bone, shell, crushed lime and leaves. Surely never has the human head been more inventively transformed by artists. Vast paddles stand in for ears and a pair of disciplined wooden serpents marches skyward above a Mohican-like crest; and real teeth snarl in a vulpine grin.

Simply as objects, these sculptures are a knock-out and should be seen. Shelton now has to harpoon his own particular fish, development grants, so that more can be made of Brighton's astonishing collection. He hopes to turn Brighton into an ethnographic centre for the south coast. "We should see ourselves as a regional museum, not as one more provincial collection. Then we must develop links with the small museums which do not have the resources to show their collections." He is that rare thing, a curator who talks enthusiastically about wholesale rationalising and devolution of collections.

So perhaps Brighton will spearhead change in the fusty image of ethnographia. *Exotics*, the current temporary exhibition (until the end of May but may be extended) which is part of the Brighton Festival, is a very modest show; you could probably fit all the exhibits into two suitcases, and yet it is a model of what you can do. The theme is a quotation from French sociologist Pierre Bourdieu, "The eye is a product of history". We see images of how the White Man perceived the Red Man and, more unusually, the view from the other side.

In 1898, professional photographers Frank A. Rhinehert and Adolph F. Mutter were commissioned by the organisers of the Omaha Indian Congress to take a set of studio-portraits of "typical" Red Indians "to preserve the memory of the American Indian for future generations." The Omaha Congress itself soon lost its veneer of ethnographic seriousness as it degenerated into staged battles between Indians and their conquerors. In the exhibition several dozen of these sepia photographs are displayed, poignant images of Indian couples and families which are presented without comment but simply as the melancholy records of a doomed society.

However, it is the second face of *Exotics* which is so interesting, the carvings of argillite made by the Haida Indians of the north-west coast. Argillite is a smooth black material resembling slate. Most of the pieces come from a private collection but some are from the museums at Brighton and Maidstone. The pieces were made between the 1840s and 1880s and traded with the Europeans, although it is not made clear whether the carvings are therefore a 19th-century version of "airport art", made purely for foreign consumption. Vigorous and delightful as carvings, the pieces are also highly enigmatic in the way they represent Europeans at work and play.

A number take the form of pipes, modelled on the clay pipes which were handed out to Hudson Bay employees, but there are also small figure sculptures and a splendid dish carved with a grinning beaver-man. On one pipe there is a lively scene of a European having his hair cut, on another a man being treated for goitre. The Haida may have found both activities very odd, and they appear also to have been impressed by the white men's ships and by the activities of sailors and shipwrights. A statuette of a Russian sea-captain is beautifully observed, grasping the rail of his ship in his high cap and large-buttoned overcoat.

Did European women struck the Haida as remarkably dominating compared to their own? In a lively scene of Europeans carousing a large lady in a bustle sits on the knee of a comically undersized sailor. The statuette which appears to show a mother and child may be a caricature of the white woman dandling a mannikin spouse. Odder still is a woman in Welsh dress with her steeple hat, who has Indian features. Is it the portrait of a servant, or was there a Haida lady who dressed as a Welshwoman?

This is a tiny exhibition but it works exceptionally well, partly because it takes an unfamiliar and intrinsically beautiful art-form, partly because it makes us reflect on an exceptionally rich theme, the relationship between European and exotic cultures.

Antony and Cleopatra

BLOOMSBURY THREATRE

Nothing about the first all-black British production of *Antony and Cleopatra* is perfect, and yet this is a more satisfying account of the play than the other two I've seen this year. The programme note, by the staging's director Yvonne Brewster, made me fear the worst; it goes from colonisation, via the collapse of old dynasties, to Cleopatra falling "prey to this most unroman of Romans, to his generosity of spirit and his ability to laugh". But the actors are awake to the play's tremendous range; and the production is fully aware that these characters change the course of history.

The actors in this "all-black" cast have, in fact, a vast range of birthplaces, accent, colours and acting styles. Though they are meticulous over details of scansion ("Asia" is given three syllables, "expression" four), they aren't, as yet, an ensemble. Some make musical phrases out of their lines, some chant artificially, some deliver every syllable like a bark. Almost none of them can hold the house with a pianissimo; they rely too much on volume, not enough on a current of focused tone.

But they're caught up in the business of communication. Shakespeare's verse doesn't make them inhibited or monotonous, it supplies them with a vast palette of colour and opportunity. Best, and most natural, is Ben Thomas as Caesar. He has authority, ease and terrific drive. No-one makes more music from the lines than he; he seems to cover two octaves in a single line. Worst, and most self-conscious, is Renu Setta as a rather creepily urbane Enobarbus. He rarely enters words cleanly, but drones lines as if playing the bagpipes.

Dona Croll is a funny, sensual, powerful Cleopatra, with a large, handsome, cunning and ambitious face. Her diction is slightly affected, she throws up her chin to look powerful, and, feigning ill-health, she could fool no one. She makes nothing of some lines ("Can Fulvia die?" and "or I'll unpeople Egypt") and, once on the monument, an occasional attack of tragic nobility overwhelms her and renders her variety all too finite. But she speaks in liquid phrases, she holds out lines to the light with relish ("his delights were dolphin-like") and her temper ("He words me, girls,") is splendid. She catches the untrammelled force that makes Cleopatra the most imperious and the most animal person in the play.

Jeffery Kissoon, who plays Antony, is one of the barkers in the cast. He has a proud face, heroic build and a strong voice. At first he is an odd mixture of "lascivious wassails" and polite oiliness, and his speeches are spoilt by his separate-syllable yapping. But he rises with the play and confers on Antony an extraordinary loneliness, an isolation of temperament than only Cleopatra can cure. The massive power he unleashes in the battle scenes is thrilling.

Alastair Macaulay

The Shaming of Bright Millar

MANCHESTER CONTACT THEATRE

James Stock's new play, *The Shaming of Bright Millar*, is a strenuous and perplexing experience. One might prepare for this by reading Freud's case notes or Foucault's social history. If one has no familiarity with psychoanalysis or with the history of madness, the action will be unintelligible but absorbing. If one has, the play will look like a course of therapy for its central characters. Either way, Stock tries to dramatise some intractable processes: memory, madness, guilt and suicide.

The play's 12 scenes shift between 19th-century Manchester, Nazi Germany, and contemporary Cornwall. It is the story of Elspeth, an implacable old German woman: her daughter burned herself to death; her granddaughter suffers the expected nighmares over her mother's loss. Elspeth's body is consumed by blood plasma disorder and her mind by guilt for her part in a Nazi eugenics propaganda film. Add in substantial flashback and dream roles for Hitler, and a poor 19-century lunatic called Bright Millar, and a tottering plot is felled by its own complexities.

The play comes straight from the Dennis Potter school, and resembles *The Singing Detective* in its attitude to disease and mental disorder. It would fare much better on television, where its intercutting suits the medium. While Brigid Larmour's direction manages the transitions well enough, and a sensible open set keeps the action clean, the play's plotlessness wins in the end.

The language is brutal, steaming hot from the trooper's kit bag, and often violent: the world around us is "a vast museum of pain", Mahler's songs "like scabs you can't help picking at." The violence of the central episode (or "primal scene", for the psychoanalysts), the trepanning of Bright Millar in the name of religio-scientific investigation, is sadistic and sickening. The actors cope admirably, with Joan Heal as Elspeth and Robin Soans as Hitler particularly good. Paul Brightwell makes the most of the difficult lunatic part, producing the screams and incoherences to order.

The play needs shortening, and the acting style fails to grasp that histrionics are no substitute for issues humanely expressed so that they speak of us as well as of the situation on stage. I hope this play improves; it deserves to. Now, it has three main drawbacks. Its material is too dense; characters have to scale emotional heights as soon as they start each scene. Its shifts are too abrupt and arbitrary, depriving the play of pace and momentum. And its answers fail to live up to the elaborateness of its enquiry.

Its conclusion is grim: the past never dies, and the children pay for their parents' blunders as they snowball down the generations. This sentiment reminded me of Philip Larkin's vicious lines: "Man hands on misery to man, It deepens like a coastal shelf; Get out as early as you can, And don't have any kids yourself"; but *The Shaming of Bright Millar* is even more desolate.

Andrew St George

Christa Ludwig

WIGMORE HALL

According to the reference books Christa Ludwig was born in 1928, but we don't have to believe that if we don't want to. Her recital on Sunday was an exemplary demonstration of Lieder singing, in which her vocal powers seemed scarcely diminished by the years. Though the tone hardens a little now when pressed to climaxes, it is still utterly unmistakable; inflections are touched in with as much precision as ever and the sense of line, the peerless continuity, remains immaculate. Admirers may have anticipated the recital with apprehension, fearing to finding only a pale replica of a great singer; they can only have gone home exhilarated by the persistence of her art.

On her last appearance at the Wigmore Hall Miss Ludwig sang Schubert's +Winterreise+. This time, accompanied by Charles Spencer, she offered a very mixed programme, beginning with a Schubert group which included "Der Lindenbaum" from the Müller cycle, and going on to Wolf, Liszt, Von Einem and Strauss. As she relaxed and got into the recital, her singing audibly rolled back the years. There was swift, uncomplicated characterisation in Schubert's "Der Tod und das Mädchen", but "Der Musensohn" was a little laboured, as if the voice was still limbering up; suave, beautiful tone in Wolf's "Anakreons Grab", and a light, knowing touch in "In dem Schatten meiner Locken".

After the interval four Liszt songs of uncertain musical quality (including the rambling "Die drei Zigeuner", which gave Mr Spencer the opportunity to shoot off on a Hungarian rhapsody of his own), preceded the London premiere of Gottfried von Einem's +Bald sing ich das Schweigen+, a songcycle on poems by Lotte Ingrisch. It is a sequence of meditations on impending death told in brief, uncomplicated lyrics and a style that wouldn't have perplexed Wolf. But it is an idiom that Miss Ludwig commands utterly, and she charged the songs with an intensity that belied their lack of substance. When in the final song the world of Mahler's Ruckert songs was glancingly evoked, the echo brought with it memories of Ludwig's own imperishable Mahler performances, and Von Einem's colourless setting was convincingly eclipsed. After that there some Strauss, including a sensuously unfolded "Morgen" and as glorious first encore, "Zueignung", with the line soaring to its climax as majestically as ever. A marvellous evening.

Andrew Clements

Ohana's Cello Concerto

RECONTRES MUSICALES D'EVIAN

Evian is best known for its water, its casino and an annual string quartet competition. But the competition (no first prize this year) is just one part of the "Rencontres Musicales" – a meeting-point between gifted young musicians and some of the world's great musical personalities. Thanks to Mstislav Rostropovich, the inspirator of the whole enterprise, these young musicians can also take part in the first performance of works he has commissioned. Last year saw the premiere of Schnittke's Second Cello Concerto. This year it was the turn of Maurice Ohana.

Now in his late seventies, Ohana is finally being recognised as an original voice in postwar music. The reception given to his opera *La Célestine* three years ago in Paris suggests he is even acquiring cult status. This 18-minute cello concerto is neither strikingly exploratory nor populist, but it is still a fascinating, fastidiously-constructed piece of music. Subtitled "In Dark and Blue", it takes the form of a rhapsodic nocturne, full of sultry warmth and seductive sonorities, with jazz effects that could have drifted in from some sleazy Mediterranean night-club.

In his instrumental colouring – muted trumpets, delicate woodwind voices – Ohana's kinship with Falla and Debussy is openly acknowledged. As in *Anneau du Tamarit* (1976), Ohana's first essay in this genre, there are passages (like the opening cadenza, after a moody orchestral entrée) where the solo part sounds more like a plucked guitar or bass. He also indulges in teasing glissandi and makes the cello sing, dream, pirouette and pout, with gently contrasted backing not unlike a sophisticated jam session. There are no large gestures or bravura effects: the mood is laid-back, almost private.

Rostropovich brought all his tonal splendour to bear, though the piece must be one of the least taxing of his recent commissions. This year's resident orchestra was Japanese – the Symphony Orchestra of the Toho Gakuen Music School, which consists almost entirely of immaculately turned-out teenage girls. Under Seiji Ozawa, they were an impressive machine, meticulous if rather impassive in the two overtures framing the programme – Mozart's *Impresario* and Bernstein's *Candide*. Ozawa also conducted a sumptuous account of the Tchaikovsky Serenade for Strings, after which the expensive Evian audience found the Ohana concerto something of an anti-climax.

Andrew Clark

INTERNATIONAL ARTS GUIDE

TODAY'S EVENTS

■ BARCELONA

Gran Teatre del Liceu 21.00 Recital by Kiri te Kanawa accompanied by Roger Vignoles, with songs by *Mozart, Liszt, Strauss and others.* Tomorrow and Sun: Tosca (412 1466)

■ BERLIN

Staatsoper unter den Linden 19.30 John Cranko's ballet The Taming of the Shrew, also tomorrow. Thurs: La traviata. Fri: Pelleas et Melisande (2004 762)
Komische Oper 19.30 Gunter Kramer's production of Der Freischutz. Tomorrow: The Bartered Bride. Thurs: Giustino (2292 555)
Deutsche Oper 19.30 Otto Nicolai's Die lustigen Weiber von Windsor. Tomorrow: Aida. Thurs: Manon Lescaut. Fri: concert to celebrate 200th anniversary of Berlin Sing-Akademie. Sun: Tristan und Isolde with Kollo and Jones (3410 249)
Philharmonie Kammermusiksaal 20.00 Christian Mandeal conducts *RIAS Youth Orchestra in music* by Reger and Schubert, with Kolja Blacher soloist in Mendelssohn's Violin Concerto. Tomorrow: Berlin Philharmonic Orchestra plays Schnittke, Boulez, Ligeti and a Kurtag world premiere. Thurs, Fri, Sat and Sun: Giulini concerts (2614 383)

■ BONN

Oper 20.00 Vaclav Neumann conducts The Bartered Bride, with a cast including Alfred Muff as Kecal and Graham Clark as Vasek, also Sat. Tomorrow: Falstaff, with Juan Pons in title role. Thurs and Sun: Pelleas et Melisande (773667)

■ BUDAPEST

Academy of Music *19.30 Andras* Ligeti conducts Hungarian State Symphony Orchestra. Tomorrow: Donald Johanos conducts Budapest Symphony Orchestra
State Opera 19.00 Les Contes d'Hoffmann, also Fri. Tomorrow: Tannhauser
Erkel Theater 19.00 La Gioconda, opera by Ponchielli sung in Hungarian, also Fri. Pre booking at Philharmonic booking office, Vorosmarty ter 1, and central *theatre box office, Andrassy ut* 18

■ GLASGOW

Royal Concert Hall 19.30 Riccardo Chailly conducts Royal Concertgebouw Orchestra in Bruckner's Fifth Symphony (041 227 5511). The orchestra plays an alternative programme tomorrow at Birmingham's new Symphony Hall (021 782 8282), and then visits *the Barbican in London on Fri and* the Chatelet in Paris on Sat

■ LONDON

MUSIC
Covent Garden 19.30 Hildegard Behrens sings Tosca, with Neil Shicoff as Cavaradossi and Samuel Ramey as Scarpia, also Fri. Tomorrow and Sat: Carmen. Thurs: David Bintley's new ballet Cyrano (240 1066)

Coliseum 19.30 Monte Jaffe sings title role in Stephen Oliver's new opera Timon of Athens, staged by Graham Vick and conducted by Graeme Jenkins, also Fri. Tomorrow and Sat: Peter Grimes. Thurs: Mackerras conducts The *Cunning Little Vixen* (836 3161)

Royal Festival Hall 19.30 Paolo Olmi conducts Royal Philharmonic Orchestra in concert performance of Nabucco, with Matteo Manuguerra in title role and Julia Varady as Abigaille. Thurs: Montserrat Caballe sings opera arias (928 8800)

Queen Elizabeth Hall 19.45 Jonathan Brett conducts English *Classical Players in Brahms'* Serenade No 2, Dvorak's Czech Suite and Mendelssohn's Violin Concerto, with Maurice Hasson. Tomorrow: Fischer-Dieskau sings Schubert (928 8800)

Sadler's Wells 19.30 Opera 80 begins a two-week season featuring performances of Die Zauberflote and Don Pasquale, sung in English (278 8916)

Barbican 20.00 *Mariano Torres* Spanish Dance Company presents A Night in Seville, popular flamenco dance musical. Also tomorrow, Thurs and Sat. Fri: Cahilly conducts the Royal Concertgebouw Orchestra. Sun: Henry Mancini in concert (638 8891)
THEATRE
This week's Royal Shakespeare Company repertory at the Barbican includes King Lear (tonight), directed by Nicholas Hytner with John Wood in the title role. This is followed by Bill Alexander's production of Much Ado About Nothing (tomorrow and Thurs) and Love's Labour's Lost, directed by Terry Hands (Fri and Sat). In The Pit, the RSC is showing Christopher Marlowe's Edward II and The Last Days of Don Juan, Nick Dear's *adaptation of Tirso de Molina's* bawdy morality play. For information about other shows, call Theatreline from anywhere in UK: Plays 0836 430959 Musicals 0836 430960 Comedies 0836 430961 Thrillers 0836 430962

■ MUNICH

Staatsoper 19.30 Gerd Albrecht conducts Harry Kupfer's production of Tchaikovsky's The Maid of Orleans, also Fri. *Tomorrow:* Cinderella (ballet). Thurs and Sun: Boris Godunov (221316)

■ NEW YORK

DANCE
Metropolitan Opera 20.00 American Ballet Theatre production of La Bayadere, also tomorrow and Thurs. Season runs till June 22, with daily performances except Sun (362 6000)
New York State Theater 20.00 NY City Ballet in works by Balanchine, Jerome Robbins and Peter Martins. Season runs till June 30, with daily performances except Mon (870 5570)
THEATRE
Off Broadway the following shows can be recommended: Breaking Legs is a comedy by Tom Dulack about what happens when some Mafia godfathers want to invest in a Broadway show (Promenade Theater). The Resistible Rise of Arturo Ui, directed by Carey Perloff, is Brecht's savage parable of the rise of Hitler, set in gangland Chicago (Repertory Theater). Night Sky, starring Joan Macintosh, is Susan Yankowitz's play about a brilliant astronomer who suffers a head injury, leaving her unable to speak, and struggles to create a new identity and language (Judith Anderson Theater). Ticketron (246 0102) answers inquiries and sells tickets for shows on Broadway

■ PARIS

DANCE
Théâtre de la Ville 20.30 Shijima (1988), ballet by Ushio Amagatsu. Runs till Sat (4274 2277)
Théâtre des Champs-Elysees 20.30 Mark Morris Dance Group. Runs till Sat (4720 3637)

MUSIC
Chatelet 19.00 Thomas Zehetmair accompanied by Emanuel Ax plays violin sonatas by Mozart, Debussy, Schoenberg and Brahms. (4028 2840)
Salle Pleyel 20.30 Andras Schiff plays piano music by Bach, Reger, Handel and Brahms. Tomorrow: concert by Lamoureux Orchestra including Villa Lobos' Guitar Concerto. Thurs, Fri and Sat: Semyon Bychkov conducts Orchestre de Paris (4561 0630)

■ PRAGUE

National Theatre 19.00 Armida, opera by Dvorak, also Fri. Other Dvorak opera performances this week include Rusalka (Thurs) and The Devil and Kate (Sat). A new production of Die Entfuhrung aus dem Serail opens in the Smetana Theatre on Sat, followed by a performance of Don Giovanni on Sun.
Prague Castle 20.00 Frank Peter Zimmermann, accompanied by Alexander Lonquich, plays violin sonatas by Mozart, Bartok and Prokofiev. Tomorrow: The Consorte of Musicke directed by Anthony Rooley, plus recital by Barabara Hendricks
Pre-booking at Sluna ticket agency, Wenceslas Square 28

■ VIENNA

Staatsoper 19.00 Peter Schneider conducts Die Zauberflote. Tomorrow, Fri and Sun: Lucio Silla. Thurs: Entfuhrung. Sat: Idomeneo (51444 2960). Tomorrow at Theater an der Wien: last chance to see Jonathan Miller's Vienna festival production of Le nozze di Figaro (586 1676)

Musikverein 19.30 Georges Pretre conducts Vienna Symphony Orchestra in Haydn's Symphony No 101 and Mahler's Fifth (505 8190)
Konzerthaus 19.30 Robert Holl, accompanied by Rudolf Jansen, sings Lieder by Schubert, Fussl and Pfitzner. Tomorrow: Julius Bittner's Great Mass. Thurs and Fri: Arditti Quartet (7124 6860)

European Cable and Satellite Business TV

(all times CET)

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CNN
0500-0530 Moneyline
0800-0830 Moneyline
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1330-1400 Business Day
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2300-2330 World Business Today
0100-0130 Moneyline
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0700-0830 Financial Times Business Report
A five minute business briefing *broadcast three times between* 0700 and 0800
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Sky News
1200 International Business Report
2130 (Thurs) Financial Times Business Weekly

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Fast-track or the buffers

ONLY US Congressmen who want to go down in history as having wrecked the world trading system should vote against the Bush administration's request for a two-year extension of its mandate to negotiate trade agreements.

The so-called fast-track authority that is encapsulated within this mandate expires at the end of the month. Without it there would be no chance of completing the Uruguay Round of multilateral trade negotiations or of agreeing the mooted free-trade pact with Mexico. Even for those who wrongly believe the US should forsake multilateralism for regionalism in its trade policy, the case for extension is compelling. Without it the US would not even have this choice. It would be thrown back on aggressive unilateralism. This would eventually redound against its own exporters as retaliation elsewhere choked off their overseas sales.

Yet while a vote in favour of the fast-track would lift the immediate uncertainty surrounding the Uruguay Round, it would be insufficient to ensure its eventual success. Protectionist pressures are not abating. On the contrary, they are growing as the world economy slows. All participants should redouble their efforts to complete the Round quickly, if possible by the end of the year.

Acute pressure

Mrs Carla Hills, US trade representative, has fought hard for an extension to the fast-track. Expectations in Washington are that Congress will now comply, however grudgingly. Yet this will also raise new expectations. A positive vote would mean she could no longer expect to be applauded at home, simply by standing firm in the Uruguay Round. Instead she will be under acute pressure to deliver.

The temptation to fudge a deal with the European Community on the divisive issue of farm subsidies would look beguiling. The Round could then be dressed up as a success, but it would have achieved little in practice to enhance the status of the Gatt and strengthen the multilateral trading system.

This temptation may have been made all the stronger by the way in which Mexico has taken centre stage in the fast-track debate. The Uruguay Round has enjoyed benign neglect. This suggests it is now seen as an innocuous affair, to be wrapped up quickly for the sake of international harmony but of no direct relevance to the real problems of US competitiveness. Meanwhile, a fudge would let an anguished Brussels off the hook of farm reform.

Yet it would be a great mistake for either Washington or Brussels to try to cobble together a deal simply for the sake of political expediency. Other players, notably the Cairns group of farm exporting nations, would object. Moreover, the Round would only be a true success if it were to curb unilateralism in US trade policy and allay the threat of bitter trade conflicts by imposing genuine discipline on farm support.

Mature approach

Other participants are aghast at the petulance of top negotiators in both the US and EC, which has left them barely on speaking terms. Mr Arthur Dunkel, Gatt director-general, indicated in London this week that the world expects a more mature approach. Substantive reform is the only way to secure the potential benefits of the round for billions of people.

The US must accept the obligation to reduce unilateralism. It is no use pretending, as many in Washington nowadays do, that disputes with countries like Japan are somehow special and should be handled outside the confines of the Gatt. Equally, the US does not have the sole right to decide when and how individual service sectors should be opened up.

The political price of curbing unilateralism would be very high. Washington would never pay it without substantial cuts in EC farm support. Europeans who think otherwise are guilty of flagrant self-deception.

A fast-track extension would provide one last opportunity to pull back from the brink of anarchy in trade. Exploiting it should not be portrayed as political sacrifice, but as what it really is, enlightened self-interest.

The post-16 caucus race

HOW CAN the government raise the proportion of young people who stay on at school or college after 16? In a world where competitive advantage lies largely in the knowledge and skills of a nation's workforce, finding the right answer is of paramount importance.

The full-time education and training stakes in England and Wales eliminates runners almost as fast as the Grand National. Nearly half the field drops out at the earliest possible point in the race - with the end of compulsory education at 16. After another year, only a third of young people have stayed the course. By 18, fewer than one in five remains in full-time education or training.

Yesterday's white paper on education and training aims to raise the numbers staying on to the levels in other industrial economies where 80 or 90 per cent stay on beyond 16 and more than half are still in the race by 18. The government attributes the current rate of attrition to the poor image of vocational qualifications – seen as a second best for those unable to make the grade in the academic stakes. The solution offered is a new and improved system of vocational qualifications to be introduced by the end of 1992. These qualifications will count towards a new diploma which will become the entry requirement for higher education.

Job guarantees

The white paper contains a lot of other worthwhile measures besides, including the opening of schools to part-time and adult students and formal links between the local authority careers service and the TECs. The training credit scheme is to be extended to every 16- and 17-year-old leaving full-time education, providing a voucher which can be cashed in for training in the future. And the "compacts" trial pioneered by the now-defunct Inner London Education Authority is to go nationwide, offering young people guarantees of a job with training if they meet goals they agree with local employers and their schools or colleges.

But it is on the proposals for a unified approach to post-16 qualifications that the white paper will be judged. Is it credible to assert that giving formal equivalence to academic and vocational qualifications will lead to parity of esteem – from employers, gatekeepers of higher education or young people? Will an Alice in Wonderland-style caucus race in which all who enter win prizes attract more young people to stay on than a steeplechase?

Highest hurdle

The answer is probably that it will, but not nearly enough – because it fails to remove the highest hurdle in the post-16 education stakes, the A-level examination system. This highly refined procedure for selecting a small minority of pupils to go on to degree courses dominates the academic agenda for post-16 education, mainly for the convenience of the universities. It often damages those who succeed in it by excessive specialisation, making a virtue out of biochemists who cannot communicate and arts specialists who can barely calculate percentages.

More seriously, it limits the options of the four out of five young people who cannot hope to achieve passes at A-level and thus have little opportunity to secure academic qualifications after 16.

The virtue of the A-level system is that it provides a strong start for students to achieve high standards at university in undergraduate degree courses which are among the shortest in the industrial world, at no little saving to the exchequer. No doubt this is why the white paper recommends the retention of A-levels undiluted, though with further development of the AS levels which seek to achieve the standard of A-levels with half the content. But it leaves as the pinnacle of academic achievement in England and Wales success in an examination whose main feature is that it excludes most young people from its scope.

This not good supply-side policy for a knowledge-based society. The problem is hardly solved by an administrative solution which insists that every qualification is henceforth equal. What is needed is a range of qualifications suited to the full range of talents and disciplines, between which it is possible to make free choices.

Andrew Adonis on how the main parties measure up in further and higher education

Bottom of the class

If British politicians agree on anything, it is that their country is the thick man of Europe.

The continental comparisons are damning, familiar and unquestioned. Fewer 16-year-olds remain in full-time education in the UK than in any other advanced industrial nation. Of those who leave, a pitifully small number receive skilled vocational training. And those who stay on specialise so early and so narrowly that illiterate engineers and innumerate historians are par for the graduate course.

With yesterday's white papers on further and higher education, all the main parties have announced their plans for kick-starting the learning process. How do they measure up in the four critical areas: A-level reform, vocational training, the planning of 16-19 provision, and the expansion of higher education?

● A-levels: "We love comparing ourselves to Europe," says Mr Richard Pearson of the Institute of Manpower Studies, "but we should start with Scotland for inspiration." It is not simply that more Scots remain in full-time education beyond 16: Scots who stay on study four, five or six subjects at Higher level, a far broader grounding than A-levels provide. The Higher is a one-year course, so university entrants north of the border have less specialised knowledge than their English counterparts. But four-year first degrees mostly take care of that.

The Higher is under review, with calls – sidestepped in the separate white paper on education in Scotland – for it to be turned into a two-year course. That done, it would approximate to the five-subject A-level proposed for England and Wales by Professor Gordon Higginson's official inquiry in 1988.

The Higginson report is warmly endorsed by most of the education world, where A-levels are virtually friendless. Yet it has long been a political dead duck. Its fate speaks volumes for the party politics of post-16 education.

For the Conservatives, more means worse. Spurred by the right and the public schools, Tory education secretaries (there have been five in 10 years) condemn – in knee-jerk fashion – any questioning of the so-called "A-level gold standard". Mr Kenneth Clarke does so again in his white paper: beneath the camouflage of the new "advanced diploma", A-levels survive unchanged.

Yet why should five-subject, as opposed to three-subject, courses imply lower standards? The white paper gives no convincing answer. They might necessitate four-year degrees; but the objections to those come from the Treasury, not from the universities.

Labour and the Liberal Democrats, on the other hand, go well beyond Higginson and want to abandon the A-level entirely, replacing it with modular-based post-16 courses for both academic and vocational students.

Mr Jack Straw, Labour's education spokesman, insists that academic standards would be maintained, and talks of "core skills" linking vocational and academic modules. Yet these "core skills" turn out to be formulations like "values and integrity", "positive attitude to change" and "understanding of work and the world" – all very worthwhile, but of dubious value in constructing a common curriculum for post-16.

Sceptics may be right to fear that Labour and Liberal ideas have more to do with crude social engineering (an end to A-level "elitism") than with life-chances and national efficiency.

● Vocational training. Rather than lump A-levels and vocational qualifications together, the white paper proposes to create a streamlined, more attractive set of vocational qualifications. The National Council for Vocational Qualifications will be responsible for overseeing their development and implementation.

This reform is to go hand-in-hand with reforms to the careers service, an extension of training credits to all 16- and 17-year-old school or college leavers, and new "ordinary" and "advanced" diplomas, aimed respectively at GCSE- and A-level standard and their vocational equivalents. Ministers intend the diplomas to raise the prestige of vocational courses without devaluing the academic, and students will be able to mix the two to attain them. Yet virtually no schools currently offer BTEC courses; it is not clear how the diplomas are going to encourage them to do so.

The success of the new framework will depend more than anything on the readiness of employers to train their staff or to release them for training. The white paper is silent on the question of compulsion: ministers clearly hope that company executives on the boards of the Training and Enterprise Councils – there are now 675 of them in all – will encourage the others. In a worsening recession, that may be too much to expect.

● 16-18 provision. The provision of post-16 education is highly fragmented, and will be still more so after the white paper. For every four 16- to 18-year-olds in school, there are three full-time in sixth-form, tertiary or further education colleges. Until now, local education authorities have had responsibility for planning local provision, and they have generally moved towards colleges – often in the teeth of opposition from schools losing their sixth-forms in the process. The institutional pattern varies greatly across the country: in some areas competition reigns; in others there is, effectively, a monopoly supplier.

Colleges themselves are mostly keen to gain their freedom, provided the new financial regime is favourable. "If the money is forthcoming", says Mr Clive Wickens, principal of Oxford's 13,000-strong further education college, "then there are clear advantages in running our own show and being free from a local political process beyond our control". He discounts Hobbesian fears of anarchy: the college is keen to maintain its "very good relationship" with both the local education authority and the local upper schools (they currently produce a single post-16 prospectus).

However, Oxfordshire's chief education officer, Mrs Jo Stevens, is less sanguine. "Planning post-16 is already fraught; it may become almost impossible, particularly if a large number of schools opt out" – as Mr Clarke hopes they will.

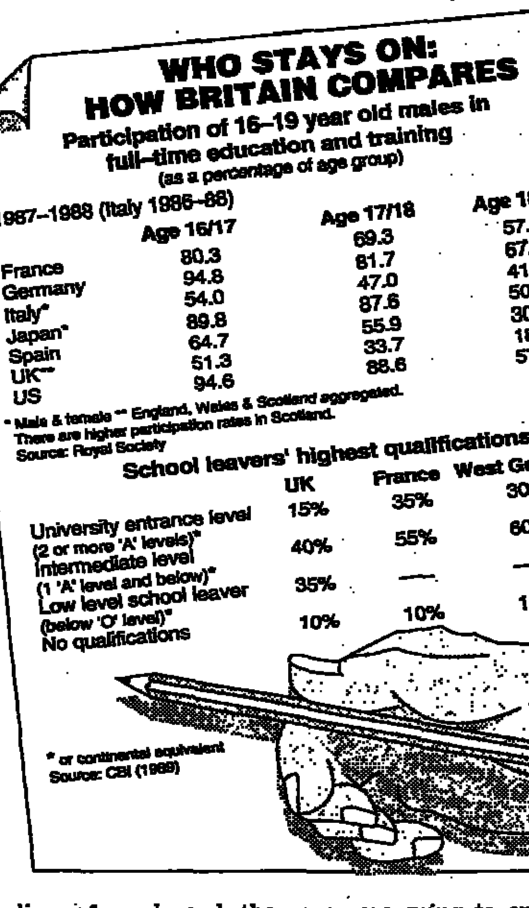
A proposal to create a tertiary college in Banbury, in the north of the county, has already been deferred, despite broad local support. If the new system proves incapable of managing change, a future government may have to create special local bodies to overcome planning blight. Perhaps it will call them "local education authorities".

The colleges themselves will need clear and close guidance from their new funding council. Most have only limited experience of managing their own finances; many are small and vulnerable. The polytechnics and colleges funding council has its hands full with only 84 institutions, and its latest report acknowledges that eight of them face "severe financial problems". There is some concern that even with a regional sub-structure the new colleges funding council, with nearly 500 institutions to its name, may prove inadequate for the job.

● Higher education. Progressive elimination of the legal division between the 41 universities and 33 polytechnics in England and Wales, and the merging of their funding councils, has long been on the cards. But the change may be more apparent than real. Higher education institutions earn their own reputations, and their formal titles have little to do with it.

Proposals on higher education funding may, in the medium term, prove far more consequential. Mr Clarke is proposing a big shift from grants to fees, in effect introducing vouchers through the back door. This should encourage institutions to market themselves more effectively, but their ability to expand will ultimately depend upon resources, unless standards plummet. And since fear of the southern middle classes has led the government once again to resist measures to raise an appreciable proportion of funding from students themselves, as does virtually every other higher education system in Europe, the sector can probably expect a cash-starved 1990s to follow a lean 1980s.

Post-16 education is now at the forefront of the political battle. There are broad fields of consensus, but more than sufficient areas of disagreements for it to become a political football. If it does, the consequences will be debilitating. "Meanwhile," as Mr Pearson at the Institute of Manpower Studies remarks acidly, "the rest of Europe is not waiting for us to catch up".



WHO STAYS ON: HOW BRITAIN COMPARES
Participation of 16–19 year old males in full-time education and training
(as a percentage of age group)

1987–1988 (Italy 1986–88)	Age 16/17	Age 17/18	Age 18/19
France	80.3	69.3	57.9
Germany	94.8	81.7	67.7
Italy*	54.0	47.0	41.0
Japan*	89.8	87.6	50.0
Spain	64.7	55.9	30.4
UK**	51.3	33.7	18.8
US	94.6	88.6	57.3

* Male & female ** England, Wales & Scotland aggregated. There are higher participation rates in Scotland.
Source: Royal Society

School leavers' highest qualifications

	UK	France	West Germany
University entrance level (2 or more 'A' levels)*	15%	35%	30%
Intermediate level (1 'A' level and below)*	40%	55%	60%
Low level school leaver (below 'O' level)*	35%	—	—
No qualifications	10%	10%	10%

* or continental equivalent
Source: CBI (1989)

OBSERVER

Lamont mints it

■ Chancellor of the Exchequer Norman Lamont has been having a bad few days.

First came the gaffe in which he said rising unemployment was a price worth paying to get Britain's inflation down: next, then reports that he was going to sue the sex-therapist who has set up shop in his west London home; and now, to cap it all, the Treasury and Civil Service Committee is cracking the whip over what can fairly be called a Treasury coinage scam.

A report from the committee yesterday could find little good to say about the latest series of changes to the UK coinage system for which Lamont, as Master of the Mint, is ultimately responsible.

Clearly, the committee regards the system as inconvenient, with the seven denominations in current use excessive. It suggests getting rid of the heptagonal 20p coin, and criticises the microscopic and almost weightless 5p for an over-swift introduction.

Its most serious quibbles, however, are reserved for the 50p piece. Not only is it too heavy, the committee says, but its existence has become unnecessarily costly.

The reason is that the introduction of the £1 coin has killed demand for 50p pieces, producing what the committee describes as a "chronic surplus." As a result, London and Scottish clearing banks are having to store them.

With the current surplus of the things running at 50m coins, storage is a weighty problem – so much so that outside contractors are having to be used. Worse, since the coins earn no interest, the banks sitting on £25m worth of them are suffering a marked loss of revenue.

Oddly, the Treasury goes on insisting that the 50p pieces must be kept in existence, on the somewhat suspect grounds that they will eventually be needed. By a happy coincidence, however, the result is that the Treasury has secured interest-free borrowing for the government at a time when Lamont is presiding over a sharp swing into public-sector deficit.

Well connected

■ Good economists seldom seem to retire these days, so it comes as little surprise to find that Christopher Johnson, 60, has been appointed UK adviser to the Association for the Monetary Union of Europe within days of announcing that he is to leave his post as chief economic adviser at Lloyds Bank.

In his new job, Johnson will spend much of his time explaining to British businessmen what is involved in the increasingly likely move to monetary union and a single European currency. He will focus his efforts on industry and the banks, but will also be active in spreading the word to MPs and civil servants.

Two attributes which will help him in his new post – his array of contacts and a quietly persuasive manner – owe much to an earlier career. Before joining Lloyds in 1977 he spent 16 years at the FT, where he was was successively Paris correspondent, diplomatic correspondent and foreign editor. He ended his FT days as managing director of the paper's Business Enterprises division and a director of the company.

Wounded knee

■ Central Independent Television, the Midlands station perhaps best known for its Spitting Image satirical puppet show, has found itself on the receiving end of criticism over an apparent bonanza for directors in the current competition for franchise renewals.

If the company succeeds in retaining the Midlands franchise, it seems, six senior executives will stand to share a total cash bonuses of up to £1.35m provided they serve out their contracts.

Fair enough, one might think: other independent television stations are planning to reward their executives similarly if they win. Except that, since nobody is bidding against Central for the Midlands franchise, it seems like money for old rope.

Central yesterday put up a robust defence of the deal. Tying in a strong executive team in this way was undoubtedly a factor in staving off the threat of a rival bid, it said. And how could it have a foreseen that no competition would emerge when it drew up the agreements last year?

"It's like asking why Spurs put Gazza on the team for the Cup Final on Saturday when he was going to be taken off with a torn ligament after 15 minutes," it said, in an analogy which left one struggling to identify Central's wounded knee.

"I asked for a Saddam wristwatch and a pair of boxer shorts to be taken into consideration."

Exit Traub

■ Over the years Marvin Traub, chief executive of Bloomingdale's and a dapper favourite of the New York gliterati and gossip columnists, has become almost synonymous with the famous department store chain. Now they are parting company.

When the cash-hungry Campeau Corporation put Bloomingdale's on the block in September 1989, Women's Wear Daily proclaimed that the chain "belongs to Traub". But 66-year-old Traub failed in his attempt to acquire the chain of 17 stores he had run since 1978, and Bloomingdale's, along with Campeau's Federated and Allied US retailing empire, filed for protection from creditors under Chapter 11 of the federal bankruptcy code.

Although Traub presided over Bloomingdale's decline, analysts said his reputation as a retailing wizard was not tarnished by the problems that have plagued Bloomingdale's since the Campeau acquisition. "He was not responsible for the leverage which led to the Chapter 11. Nor was he responsible for the recession," says one analyst. But Bloomingdale's has been criticised for not cutting costs suffieciently or improving branch stores.

Traub, whose tenure had been due to run till 1993, will remain until August to help with the transition. His suitably glitzy successor is Michael Gould, 48, who has been head of Giorgia Beverly Hills, the Los Angeles-based fragrance operations of Avon Products, since 1987.

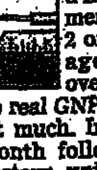
Fishy

■ How many surrealists does it take to change a lightbulb? Banana.

PERSONAL VIEW

A solution for east Germany

By George A Akerlof, Andrew K Rose, Janet L Yellen and Helga Hessenius



In a typical British or American recession, unemployment rises by 2 or 3 percentage points over a year or two, while real GNP falls about twice that much. In July 1990 – the month following German monetary unification – east German industrial output fell by more than 35 per cent. Unemployment, including short-time work, now affects more than 30 per cent of the eastern labour force. There are few signs that the situation is improving.

What is to be done? At the time of monetary unification, eastern wages were much too high in comparison with eastern productivity. Since currency union, eastern wages have risen quickly – by almost half since the beginning of 1990. At current wages, by our calculations, enterprises employing only 8 per cent of eastern industrial labour can sell their output at prices high enough to cover their operating costs. Massive lay-offs are occurring. Firms which are losing money at these wages cannot be sold to entrepreneurs who will operate them. Thus, privatisation will proceed slowly even if the ambiguity of property rights and similar problems are sorted out. And, at these wages, investment will be insufficient for an east German economic miracle. Wages in eastern Germany last July were eight times as high as in Poland and roughly 60 per cent of US levels.

Businesses are being expected to shoulder the burden of rapid wage rises. Instead, they are staying out of east Germany. Why would private business take on such a burden?

How can the political guarantee of high income for easterners be reconciled with the need for realistic labour costs? Wage subsidies to eastern businesses are the solution. The German government should offer employment bonuses – payments which are a specified fraction of each worker's wage – to all private non-agricultural firms, new and old, hiring workers in eastern Germany. The reduction in labour costs would enhance profitability and the desirability of eastern firms to investors. State-owned enterprises could be privatised by auctioning them to the highest bidder. The new owners would restructure them. Those which cannot be sold would be liquidated.

Wage subsidies would enable many eastern firms to price their products competitively in relation to their quality. These firms could thus be privatised. More important than the preservation of jobs in the old state-owned enterprises, large wage subsidies would encourage the new investment needed to modernise the economy. Direct investment subsidies are now being offered to stimulate capital formation. Wage subsidies also stimulate new investment by raising its profitability.

Wages subsidies would create an environment in which market forces can work. They create the correct incentives for investment, the creation of jobs, and the liquidation or sale of state-owned property. Privatised firms which respond to market signals will be the real source of the transition to a western economy, since they have appropriate incentives to raise productivity by introducing new management, technology, products, and work-habits.

Employment bonuses would reduce migration. In February, we surveyed eastern workers. We found that most easterners want to stay in the east as long as work is available, even at current pay, which is roughly half that in the west.

Best of all, wage subsidies may actually save the government money. The large wage subsidies required to reduce eastern unit labour costs to world levels are costly. But most of these costs will be incurred in their absence, since the German government is already committed to a generous programme of unemployment benefits. The direct costs of wage subsidies will be offset by reduced governmental payments of unemployment insurance benefits, as well as higher government revenues from income taxes, social security contribution and enhanced receipts from the sales of former state enterprises.

Wage subsidies should be part of a social contract: unions must agree to wage restraint in return for the employment bonuses which will insure jobs. To discourage such wage increases we propose an automatic decrease in subsidies if eastern wages rise. In particular, we recommend that wage subsidies be made proportional to the gap between western and eastern wages. This scheme not only eliminates the tendency of unions to ask for higher wages, but is also self-terminating: wage subsidies will automatically wither away as the east catches up with the west.

What are the alternatives to employment bonuses? The main alternative is a laissez-faire policy of waiting. Eventually, high eastern unemployment will lower eastern wages. Eventually, enough investment will occur for east German productivity to reach western levels. But history shows that these outcomes, if they occur, take a long time. Meanwhile, easterners will migrate to the prosperous west German states. Since east Germans do not want to move, employment bonuses to speed the eastern transition make economic and political sense.

Ford flounders in a reversal of roles

The US car maker is falling behind some of its European competitors, writes Kevin Done

General Motors and Ford of the US, the world's two largest vehicle makers, have been battling it out in Europe for years. But while GM seemed to accumulate only losses, Ford had a string of successes. Now the roles are reversed.

GM's European operations achieved record net earnings last year of $1.915bn, while the profits of Ford's activities in Europe plunged by 79.6 per cent to only $263m. The contrast is most telling in the UK, the European volume market hit hardest by recession.

Ford of Britain, the dominant leader of the UK car market, disclosed last week that it had plunged into loss – a pre-tax deficit of £274m – for the first time in 20 years. To rub salt in the wound, Vauxhall, GM's UK subsidiary, a chronic loss-maker for much of the last two decades, had revealed days earlier a record pre-tax profit of £239m.

Ford, the number two US car maker, had grown used to being able to count on its European operations to help bail it out in troubled times – it was bankrolled by Ford of Europe in the early 1980s – while GM ran up a total net loss of $2.2bn in Europe in the seven years from 1980 to 1986.

Creating excitement around a product is imprecise, but GM is succeeding, while Ford has stumbled

Today, a sense of confidence is coursing through GM's European operations, while there is a sense that Ford has begun to lose its way in the second half of the 1980s.

Ford faces the charge – particularly from British critics – that it has opted in recent years for caution rather than adventure in its approach to the design and development of new products. Its present engine range is much criticised for having fallen behind the competition. It has endured a period of unhappy industrial relations, most particularly last year in the UK and in Belgium, and it has appeared to fall behind some of the labour relations innovations achieved by its rivals, not least GM itself in Europe.

Last year Ford was overtaken by GM in the western European new car market for the first time, with GM taking over fourth place behind the Volkswagen group, the Fiat group and Peugeot, which includes Citroën. The GM group captured 11.8 per cent of western European new car sales, marginally ahead of the 11.6 per cent taken by Ford.

Apart from its strategy decisions for new products, the biggest gamble Ford has taken recently in Europe is the costly £1.56bn takeover of Jaguar, the UK luxury car maker. The profitability of its traditional core Ford operations in the UK slumped last year, but it was the financing costs for the Jaguar acquisition and the luxury car maker's continuing heavy losses that pushed Ford of Britain into such a heavy loss.

Car makers spend hundreds of millions of pounds over several years on developing new production generations. Last year Ford launched its important new generation of Escort/Orion small family car range following an investment of more than £1bn in a five-year development programme, the largest sum it had ever spent in Europe on a new product. The Escort/Orion has been Ford's most important car range in Europe, accounting for about 40 per cent of all its European car sales.

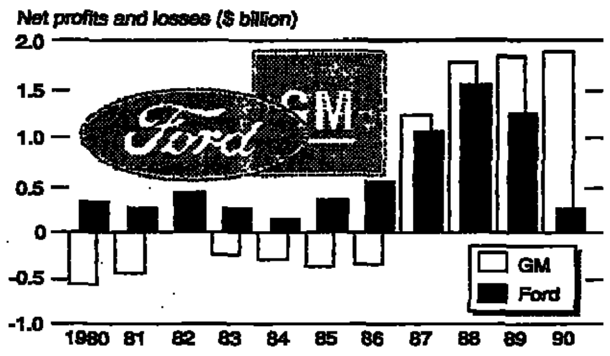
Instead of the expected plaudits the car was panned by the UK motoring press. "Ford's new Escort meets its rivals ... and loses," proclaimed the front page of Autocar & Motor, one of Europe's leading motoring magazines. Autocar followed up bravely earlier this year with a re-appraisal, and concluded: "The direction, the aspirations of the range are as middle of the the road as ever."

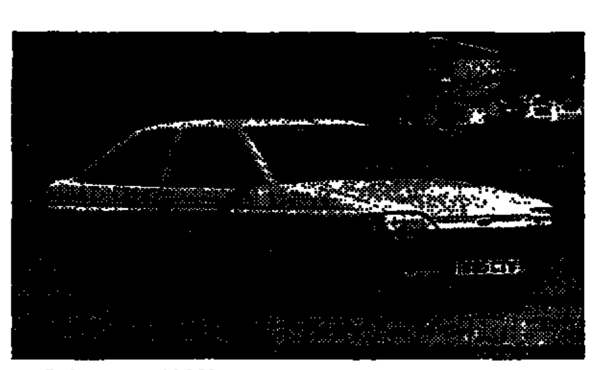
Creating the necessary aura of excitement around a product is an imprecise art, but for the moment GM is succeeding, while Ford has stumbled. The present confidence at GM in Europe has been prompted by product successes that have added a sense of dynamism to its Opel and Vauxhall marques.

Ford was clearly trumped by GM's launch last year of its sporty Opel/Vauxhall Calibra coupé. This was a market niche, which Ford had earlier dominated with its Capri, but which had been largely vacated to Japanese competitors before the successful introduction of GM's Calibra. For the moment Ford has no rival offering.

Ford and GM in Europe

Net profits and losses ($ billion)





THE NEW FORD ESCORT

GM's new generation Opel Vectra/Vauxhall Cavalier has scored heavily against the ageing Ford Sierra, which is not due for replacement until 1993, while the Ford Escort/Orion appears to have failed to open up a generation gap over GM's present eight-year-old Opel Kadett/Vauxhall Astra.

Ominously for Ford, the Kadett/Astra will be replaced by a new generation Astra range in the autumn, while the successor for the best-selling car in this class in Europe, the Volkswagen Golf/Jetta, will also be unveiled this autumn.

In the autumn GM will steal a new march on Ford, when it launches its Opel/Vauxhall Frontera, a four-wheel-drive leisure utility vehicle, into another growing specialist niche of the European vehicle market, where Ford is currently unrepresented.

Ford has allied itself with Nissan to develop a rival to the Frontera – the GM vehicle is derived from a model launched earlier by Isuzu, its Japanese affiliate – but the Ford/Nissan vehicle is not expected to appear before 1993.

In the UK, Ford's single largest market, all car makers have been hit by the recession, but Ford is under-performing the falling market. The erosion of its market share has been under way for some time with a fall from the peak of 30.9 per cent in 1981 to 25.3 per cent last year. The erosion accelerated to only 23.4 per cent in the first four months of this year.

While the UK looms large in Ford's European fortunes – not just in terms of sales, but also in terms of design, development and engineering, vehicle assembly and component production including, most importantly, engines – too narrow a focus ignores its outstanding recent success in some other European markets.

It has enjoyed marked gains in Italy, much to the discomfiture of Fiat, thanks especially to the breakthrough achieved by its new generation Fiesta small car launched in 1989, and backed more recently by the new Escort. Ford may be accused of buying market share in Italy through very competitive pricing, but it has managed to boost its market share to 11.1 per cent in Italy in the first four months this year from 7.2 per cent a year ago and only 3.7 per cent in the corresponding period of 1989. This is an extraordinary performance in an industry where gains are often measured after the decimal point.

It is also scoring heavily in France, another market dominated by small cars, where Ford increased its sales by about 13 per cent in the first four months this year, compared with heavy falls suffered by Peugeot, Renault, Fiat and Volkswagen.

Importantly it is also gaining some ground in Germany, the one new car market in Europe that is enjoying dynamic growth in new car sales this year in contrast to the gloom emanating from most other parts of Europe.

Ford argues that its financial setback last year in Europe, and in particular in the UK, was only a stumble brought on by a series of special factors, some outside its control.

Mr Lindsey Halstead, Ford of Europe chairman, has launched a campaign to make the corporation less bureaucratic, to take out layers of middle and senior management, and to push the decision-making process to lower levels in the organisation.

He argues that the first fruits of a "truly huge" programme to renew the company's engines and transmissions will be seen this year and that by the mid-1990s all its engines will have been redesigned or improved.

In 1993 Ford will launch its new generation Sierra, a car that will be vital to its chance of wresting the initiative back from GM. It is developing with Volkswagen a "people carrier" to challenge the Renault Espace, which will take it into a niche, where GM is absent, and it devoting growing resources to developing a two-troke engine to power a new generation of mini-cars, smaller than the Fiesta.

Such moves will determine Ford's fortunes in the mid-1990s, and how successfully it can put its present financial woes behind it.

Joe Rogaly

March on London

General Kinnock is advancing on London. This morning the Labour leader will fire off yet another policy paper. There is to be a new authority, a "voice", for the capital city. I will come to this much-recycled proposition in a moment, but first note that of the 100 marginal seats that Labour needs to win if it is to command a working majority in the House of Commons, no fewer than 24 are in the Greater London area. Capture London, and you probably have Downing Street in the bag.

Today's campaign was preceded by yesterday's softening up. The Labour spokesman on transport, Mr John Prescott, proposed a new quick and cheap railway line around the city, to keep traffic out of the centre. The Labour-controlled Association of London Authorities (ALA) published a report describing the run-down state of London's schools. These and similar broadsides will be followed by an ALA symposium on Friday; there Labour will deploy both the Henley Centre for Forecasting and Baroness Tessa Blackstone. Heaven help the government.

We should not be overly bedazzled by this latest example of Labour's apparently relentless competence. The opposition's mastery of strategy stands out against the recent public floundering of the Conservatives, but that is all. We have yet to see the Tories at their best. Their fight-back has only just begun. They might point out that the London Labour party is not yet completely purged of loonydom; many of today's prudent pragmatists are yesterday's ranting rabble-rousers. I suspect that Mr Kinnock and his colleagues planned the London spectacular somewhat hastily, in anticipation of a June election. If so, ammunition will have been wasted.

But a plan is a plan. London it is. So, borrowing Yankee flair, Mr Kinnock will travel down the Thames through this morning's early mists. He will be accompanied on a pleasure boat by Glenda Jackson, Melvyn Bragg and other actors and TV personalities, not to mention the star of London borough government, Mrs Margaret Hodge of Islington and the ALA. (It is not clear how many other Cleopatras will be on the barge.)

With half a dozen members of his shadow cabinet in attendance, Mr Kinnock will announce that Labour proposes to create a new "slimline" strategic authority to run London. It will be elected. Its sources of finance will, I suspect, be obscure. To give it initial clout in Whitehall, particularly on transport and road planning, a minister for London may be in charge. This is apparently preferred to an elected mayor, which some want. "It's not Clint Eastwood that London needs," says Mrs Hodge. "It's the fistful of dollars." Bereft of locally-raised finance, any local authority is more likely to produce David Dimkins.

'We don't need Clint Eastwood – we need the fistful of dollars'

What would this Greater London Authority do? Very little, and a lot. As I understand it, it would not take over London regional transport, but set itself up as a regulatory agency, overseeing investment, fare and safety policies. It would not build houses or run the schools, although it would assume responsibility for post-16 education. Even the fire brigade may not be managed, merely regulated. Control of the police could be transferred from the Home Office. There would, however, be a great deal of regional strategic oversight, and much is likely to be said about providing a voice for London.

The natural riposte is that Labour is merely bringing back the Greater London Council. That would be truly awful. I fancy that it was in these columns that the first call for the abolition of the wasteful, hopelessly bureaucratic GLC was aired; we are all better off without it. But Labour knows that. The GLA, if that is what it is to be named, will be promoted as something much less formidable than the GLC, let alone the old London County Council, which Herbert Morrison made into a personal power base and the home of municipal socialism in the 1930s.

Suitably circumscribed, an elected authority that can speak for London is highly desirable. Paris is promoted by President Mitterrand himself; Glasgow and Birmingham have benefited from a nurturing of the civic image. London is a series of orphans. All that has spoken for these lonely boroughs since the GLC closed down is something called a residuary body. If it is to remain the financial services capital of the European Community London needs to become a place in which people who are rich enough to choose want to work. That means putting more money into transport and more thought into the conservation of the capital's built heritage, its new development plans – and its image. The old City corporation with its preposterous Lord Mayor might be preserved in showcases along with the Tower of London, but it should not be an island of antiquated guild governance within any new GLA.

The Tories could have pre-empted today's manoeuvre. It is all there in Labour's plans for regional government, printed and launched many times over. There is, however, a well-founded Conservative suspicion of London-wide councils. They have a defect: Labour tends to win control over them. That is to the good. It is essential, in our centralised elective dictatorship, to establish local, alternative, centres of power. But none of this is part of contemporary Conservative thought.

So Mr John Major busied himself yesterday with an attempt to set his own political agenda, initially on national education policy. That is the subject of discussion elsewhere in these pages. Tactically, he may be right to keep off London-talk this week. Yet the Conservatives would be better-placed if they could learn to outflank Labour's easily predictable manoeuvres. It is far too soon to start joining the distant chorus heralding a Labour triumph. That may never come. But if political strategy is to be the determinant, General Kinnock is well in the lead.

LETTERS

Why the pay game has now changed

From Lord Weir.

Sir, Your editorial on Friday ("Fiddling while the jobs go") hit the nail on the head strongly and accurately.

The game has now changed, and gains in real wealth – either in terms of a company's prosperity or the level of its employees' pay – will now have to depend on maintaining or improving unit costs relative to overseas competitors.

There can be no place today for the established system where future pay is either set by shadowing the inflation of the previous 12 months, or in relation to some notional "going rate" of increases.

The persistence of these traditional attitudes will cause both severe unemployment and major corporate distress.

Incidentally, recent pay awards in the public sector suggest that the government has hardly come to terms with the new era which its own decision to enter the ERM has brought.

As you rightly say, both co-ordination and leadership in pay bargaining is essential given the severe difficulty for any individual company or organisation in changing the system on its own.

Weir,
chairman,
The Weir Group,
Cathcart, Glasgow

Backing for IFC in financing developing countries

From Mr Karl A Ziegler.

Sir, your leader "US versus the World Bank" (May 13) sets out a balanced argument for US support for a major capital increase to the market orientated activities of the banks' International Finance Corporation affiliate.

In my own experience in international banking, the IFC's support for the creation of indigenous national capital markets and co-financings between itself and private banks and companies have helped many developing countries to be weaned of dependency on development aid. These countries have been assisted into credit-worthiness – surely the best incentive to attract back their own nationals' often considerable "flight capital" into internal investment.

The bank itself should more aggressively support these moves away from aid dependency by more forcibly demanding "good governance" and accountability in their client states. The recent Joint IMP/World Bank Development Committee memorandum discrediting "excessive military expenditure" (often significantly higher than domestic health and education spendings) is a positive step in this direction.

The bank's guiding principles of lending more and more to government agencies annually and counting on "trickle-down" effects to the poor, has simply not worked.

Borrowing billions in the world's capital markets at lowest rates, based on its rich sponsor-induced triple A credit rating, simply cannot be justified in future, when the bulk of these funds are lent onward to non-self-liquidating mega-projects, often unsuited to developing economies and often riddled with adverse social and environmental side-effects.

The bank's overall goal should be to make itself redundant - by encouraging governments to be open, accountable and creditworthy.

Karl A Ziegler,
6 Bradbrook House,
Studio Place,
Kinnerton Street, SW1

From Sir William Ryrie

Sir, I greatly appreciate your support for a substantial capital increase for the Internationa Finance Corporation, the private sector affiliate of the World Bank (your leader of May 13).

Allow me to correct you on one point, however. The leader says that the "performance of IFC's loan portfolio has been weak." This is certainly not the case. IFC enjoys a triple A rating from the New York rating agencies and one of those agencies, Moody's, recently reported that: "The financial performance of IFC's loan and equity portfolio has improved steadily and is now at a very sound level." Our non-accrual rate this year will be about 4 per cent, a truly remarkable performance considering that we lend only to companies in third world countries.

Sir William Ryrie
executive vice president
International Finance Corporation
1818 H Street NW
Washington DC 20433
USA

Electricity price burden that hits large users

From Mr Doug Rodger

Sir, The article by Juliet Sychrava on the annual report of the Office of Electricity Regulation (May 15) may give an accurate summary of the report's contents, but the headline – "Power prices fall by up to 15 per cent for big customers" – is misleading.

The price reductions in question occurred in the second quarter of 1990. Because this was not made clear, it might be assumed that the statement referred to the recently completed price negotiations.

The "big" customers which obtained price reductions of "up to 15 per cent" are, in fact, the smallest users within the contract sector. For the really large users the outcome of the 1990 price negotiations was typically a reduction of 8 per cent, and the recent negotiating round has resulted in increases of 15 to 25 per cent for this group of customers in England and Wales.

Over the four-year period since 1987 large users of electricity in England and Wales have suffered a 40 per cent increase in prices, while comparable prices are down 2 per cent in Germany, up 5 per cent in France and up 1 per cent in the Netherlands.

This association welcomes the price reductions obtained by the smaller industrial users, but competition in electricity supply cannot be said to be working well until the new regime offers prices that allow its largest customers to compete on an equal basis with their overseas competitors.

Doug Rodger,
executive director,
Business Development,
Chemical Industries Association,
Kings Buildings,
Smith Square,
London SW1P 3JJ

Sound advice

From Mr David Blake.

Sir, The Treasury seems to have had no success so far in finding a new chief economic adviser to replace Sir Terence Burns following his promotion to permanent secretary at the Treasury. I suggest that it adopt the system imposed on the television industry.

Applications should be invited from candidates, who would be required to pass a "quality threshold" (for example, six O-levels, pass degree in transport economics, Nobel prize, or other qualifications).

The post would then be given to the candidate who, in a sealed bid, indicated that he would take the job for the lowest salary, or make the biggest payment to the government. This would reduce public spending and remove any suggestion of arbitrariness about allocating the job. It would also be a statement of confidence by the government economic service in the technique the government is using in the television industry, thus rebutting the criticism this has attracted.

David Blake,
42 Wilmington Square
WC1X 0ET

Britons in Iraq

From Mr M C Lowe.

Sir, Your editorial, "Protecting Iraqis" (April 29), should also have added "and UK citizens". One UK citizen, Ian Richter, has been in a Baghdad prison for five years on trumped up allegations of corruption while working on a clean water system for Baghdad. Another, Douglas Brand, has just been sentenced to life imprisonment for alleged spying. He was abducted while helping to clear the Shatt al Arab waterway of mines.

Before there is any talk of resuming any kind of relationship with President Saddam Hussein's regime, the British government and British industry should demand the return of these two fellow citizens.

M C Lowe,
managing director,
Schaffner EMC,
Headley Road,
Woodley,
Reading, Berks.

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FINANCIAL TIMES
Tuesday May 21 1991

Tokyo strives for harmony with Brussels

Economic disputes will complicate the EC president's visit, reports Stefan Wagstyl

MR Jacques Delors, European Commission president, will have left for Japan with the advice of Mrs Edith Cresson, the new French prime minister, George Graham writes from Paris. In Tokyo, the EC announced a trade promotion programme, initially budgeted at Ecu 7m-8m. Mrs Cresson, who last week criticised Brussels' attitude to imports of Japanese cars as *"laxist"*, repeated her attacks on Japan's protectionism on French television on Sunday.

Japan was welcome to invest in camera and motorcycle plants in Europe, she said, because those European industries were already dead, but it was not doing so. But the European electronics, computer and car industries must form alliances to avoid being destroyed by Japan.

MR Jacques Delors is due to arrive in Tokyo tomorrow on the first visit by a European Community president to Japan for five years.

Both sides want the trip to mark the start of a new relationship in which the agenda will no longer be dominated by trade disputes. Politics must figure as prominently as economics, say officials.

Brussels and Tokyo are both concerned that contacts of all kinds between Japan and Europe pale in comparison with contacts between Japan and the US and between Europe and the US.

But Japanese officials seem far more worried about this state of affairs than their European counterparts. For Tokyo, cool relations with Brussels are a reflection of the ignorance of many Europeans about Japan. As a foreign policy expert in Tokyo puts it: "It's not that we have had poor relations with the EC. For a long time Europeans thought that we simply didn't exist. Now at last they are taking notice."

Brussels sees things in a more hard-nosed way: improved political relations have to go hand-in-hand with progress towards economic harmony. At a press conference yesterday, Mr Jean-Pierre Leng, EC ambassador to Japan, said: "Unless we are on the right track (towards solving economic disputes), I see no possibility of real, deep political co-operation between us."

A sharp reminder of some Europeans' view of Japan came last week with the appiontment as French prime minister of Mrs Edith Cresson, an outspoken critic of Japanese trade practices. Mrs Cresson said a year ago: "Japan is an adversary who does not accept the rules of the game and whose overwhelming desire is to conquer the world." Any hope that she might have changed her mind disappeared last week when she said that while Europe was open, the Japanese economy was "hermetically sealed."

In public, officials at the Japanese Ministry of Foreign Affairs said they would have to see whether Mrs Cresson's bite was as bad as her bark. In private, they are apprehensive.

EC diplomats said that Paris did not speak for Brussels. "She is one voice among 12," was one view. Nevertheless, Mr Delors should not be surprised if he is asked more questions about Mrs Cresson's impact than anything else.

Recent trade figures have given ammunition to Mrs Cresson. They show that after declining steadily in the late 1980s – to $20.7bn last year – Japan's trade surplus with the EC has grown rapidly in the past six months. In April, the surplus with the EC exceeded that with the US for the first time in eight years.

Japanese officials blame macro-economics for this setback. The slow-down in the Japanese economy has been particularly noticeable in sales of luxury goods – including French fashions, Italian jewellery and German cars. This is only natural, say Japanese officials, in the light of last year's upheaval in Tokyo's financial markets. Moreover, continuing strong growth in Germany, boosted by reconstruction work in the former East Germany, has supported demand for Japanese goods in Europe.

Also, a quirk in Japanese statistics makes the picture look worse than it is – art imports are classed as coming from the country of the artist's origin, so Europe's exports have been hit by the slump in Japanese purchases of French Impressionist paintings.

Brussels will not be satisfied with macro-economic answers. It concedes that European companies need to do more to break into the Japanese market: yesterday in Tokyo the EC delegation announced a Ecu7-Ecu8m ($8.3m-$9.5m) plan to boost exports in five markets – food and drink, furniture, jewellery, leisure equipment and measuring instruments.

However, Brussels also wants action from the Japanese government on a host of issues, including better access for financial companies to Japanese financial markets and an easing of barriers to imports of food, leather goods and electronics. Mr Delors said recently that he wanted "a spirit of reciprocity" in economic relations – meaning more market-opening moves from Japan.

At the same time, the EC is fending off Japanese claims that the economic integration of Europe after 1992 will create a protectionist fortress. The key issue is cars. Japanese carmakers accept that their exports to the Community will be subject to limits. But they want to make sure that cars made at Japanese plants in Europe will not be restricted. Mr Delors has said that European car companies need to be given time to adapt to international competition.

Japanese officials hope that despite the time that will have to be devoted to these economic problems there will also be opportunities at meetings between Mr Delors and Mr Toshiki Kaifu, Japan's prime minister, to discuss political co-operation.

The most important immediate task in this field is to complete work on a joint declaration on EC-Japanese relations – which would be similar to those agreed by the EC and the US. The declaration would commit the two sides to wide-ranging – although loosely-specified – co-operation in many areas. However, progress has been held up by EC demands that it should be accompanied by improved trade relations. Japan's best hope now is that the document will be signed during the summit of leading industrialised nations in London in July.

In the light of the EC's strong wish to keep pressing Japan on economic issues, it is hard to see how Mr Delors and Mr Kaifu can hope to make more than symbolic progress in the political field. But they are starting from such a low level, that even a symbolic first step would be a start.

Consumers pay, Page 7

THE LEX COLUMN

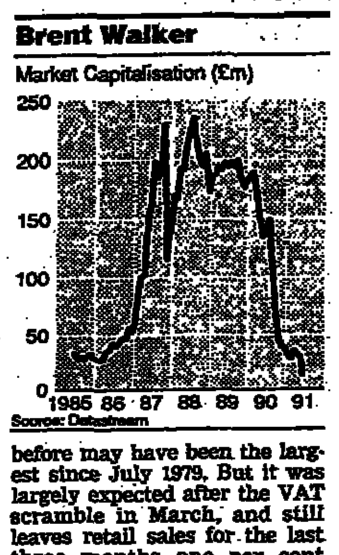
The shrinking of Walker's assets

Brent Walker's ghastly full-year figures will not in themselves determine whether a business with net debts of well over £1.2bn is about to go under. That is a matter for the banks, which will not get a sight of the group's proposed financial reconstruction until later today. But the figures afford certain clues, none of them encouraging.

Although net asset value has been written down by £690m to a mere £139m, there is no guarantee that this is a clean sweep. The directors have put their own valuation on the portfolio of development properties. Had they accepted the figure produced by their own professional advisers, the value would have been £103m lower. Other properties not for sale or development have not been written down at all. Even on the basis of orderly disposal rather than liquidation, Brent Walker's net worth may well be less than zero.

Although the proposed financial reconstruction is not yet public, some details can be inferred. It seems clear, for instance, that Brent Walker does not propose to sell William Hill, which is understandable given that it apparently covered its own financing costs last year. Nor does the plan appear to involve swapping debt for equity, the result being that the group will make a loss after interest charges for the second year running. Last year's true interest charge of £190m was only two-thirds covered.

The odds in favour of successful reconstruction are tricky to assess, given that there are some 60 banks involved. Since the group's operating businesses are no better than cash neutral, the process of trading out of trouble promises to be interminable. Brent Walker's shares look correspondingly worthless. But the banks have probably come too far by now to contemplate the grand gesture. The likelihood is that, like the empire of Mr Alan Bond, Mr Walker's will go out with a prolonged whimper rather than a bang.



Retail sales

It would be bad news indeed for the UK Government if four successive interest rate cuts since February had not produced any perceptible improvement in consumer confidence. Yesterday's retail sales figures at least suggest that the long decline in high street spending may have bottomed out. April's 3.5 per cent monthly fall in volume from the month before may have been the largest since July 1979. But it was largely expected after the VAT scramble in March, and still leaves retail sales for the last three months one per cent higher than in the previous quarter.

The question is whether even this gentle rise can be sustained. On the plus side, the sharp fall in headline inflation is boosting the real incomes of the majority still in work. Further cuts in interest rates also look guaranteed, the only question being one of timing. Even if house prices take a while to respond, turnover in housing may recover more quickly, with an immediate effect on sales of consumer durables.

But there are some pretty weighty negatives. Rate cuts are slow to work through to mortgage payments, and unemployment is set to go on rising even after output picks up. Base rates will have to fall a long way further to bring a sustained recovery in consumer confidence. The problem is that, with underlying inflation still stubbornly high, good news on the retailing front may in itself make the authorities hesitate in relaxing monetary conditions further.

AB Foods

Mr Garry Weston must be thanking his lucky stars that he won the battle to buy British Sugar. Without its profits contribution, AB Foods 12-month performance would at best have been static. As it was, pre-tax profits to the end of March were 12 per cent better at £317m. At last the group has a way around the cyclical depression holding back its milling and baking operations.

In the three months since acquisition, British Sugar contributed £32m of profit, comfortably ahead of financing costs. Medium-term questions about the European sugar regime mean political risk will continue to overhang its prospects, but there are significant cost benefits to come. It is now strongly cash positive and should help push ABF's £250m cash pile to around £370m by the new year end in September, thus allowing further diversification.

The contrast with milling and baking is instructive. The number of independent millers is reckoned to have fallen by a third last year, but the reduction in capacity merely matched the decline in the market. ABF's profits in this division were flat after allowing £12m for closing three bakeries and some redundancy costs. As for an improvement in margins or an end to the price wars, there is no sign of either. Assuming £330m pre-tax for the year to September, the shares at 510p are not expensive on a multiple of around 10. The outlook is not particularly exciting; but ABF is doing about as well as its markets are allowing.

Football clubs

The knee injury sustained by Tottenham Hotspur's star player last weekend is of most immediate relevance to the club's tense financial relegation battle with Midland Bank. But it is also pertinent to Manchester United, whose public flotation this week promises to raise roughly £17m.

The question is how to value footballers in a club's balance sheet. The two clubs adopt very different styles. Mr Gascoigne and his team mates at Tottenham are intangible assets, entered at cost. They are then awarded a residual value under rules drawn up by that noted international accounting authority, UEFA, with the difference written off over the contract period. Manchester United, by contrast, writes off its human acquisitions in year one, partly because it fears European moves to outlaw the whole transfer fee system. Anxious to persuade investing institutions that football clubs can be conservatively run, the club's intention is to build up a transfer fee reserve in the good years so that spending on the big stars does not affect the dividend.

As for Tottenham, bedside bulletins would appear to be the most important indicators over the next few days. Even without the sale of its prized intangible to Lazio for £8m-odd, the real obstacle to survival looks like the club's directors as much as its financial position.

West must aid Soviet reform says Yavlinsky

By Leyla Boulton in Moscow

MR Grigory Yavlinsky, the economist who is trying to broker a western-assisted reform package for the Soviet Union, has warned that the west would have as much to lose from a failure of Soviet reform attempts as the Soviet Union itself.

Mr Yavlinsky, who is currently in Boston to draft an outline reform plan with Harvard economists, said in an article published yesterday that the west could not isolate itself from the consequences of chaos in the Soviet Union.

He said there was no way of predicting the geopolitical implications of the economic collapse of a country bristling with nuclear weapons and atomic power plants. The continued free-fall of the Soviet economy could also spell ruin for hundreds of western companies which depended on business with it.

But in the article in Izvestia, the government newspaper, he dismissed Soviet fears of abdicating the country's independence by accepting western assistance on conditions agreed with the west.

"Certainly we will have to review our traditional idea of independence based on isolation from the world. We long prided ourselves on our exceptional nature, without even beginning to understand that the gap between the development of the Soviet Union and that of other countries was not narrowing but widening," he said.

He pointed out that the country had already become so dependent on western imports that its present lack of hard currency threatened to paralyse several sectors of Soviet industry.

"Today there are all the premises for the appearance of conditions favourable to a qualitatively new relationship between the Soviet Union and the leading countries of the world," he wrote.

He cited President Mikhail Gorbachev's landmark agreement last month with the leaders of nine Soviet republics as one example of an emerging political consensus within the Soviet Union.

But he warned that unless the Soviet Union undertook rapid reforms to produce concrete economic results, the fragile political harmony could be split asunder by new social and ethnic conflicts.

Mr Yavlinsky said he hoped to complete an outline reform plan by June 15. If agreed by both the Soviet and US presidents, the plan would then be sent to all Group of Seven governments a month before their July 15 summit in London.

Air of futility descends upon talks over future of N Ireland

By Ralph Atkins in Belfast

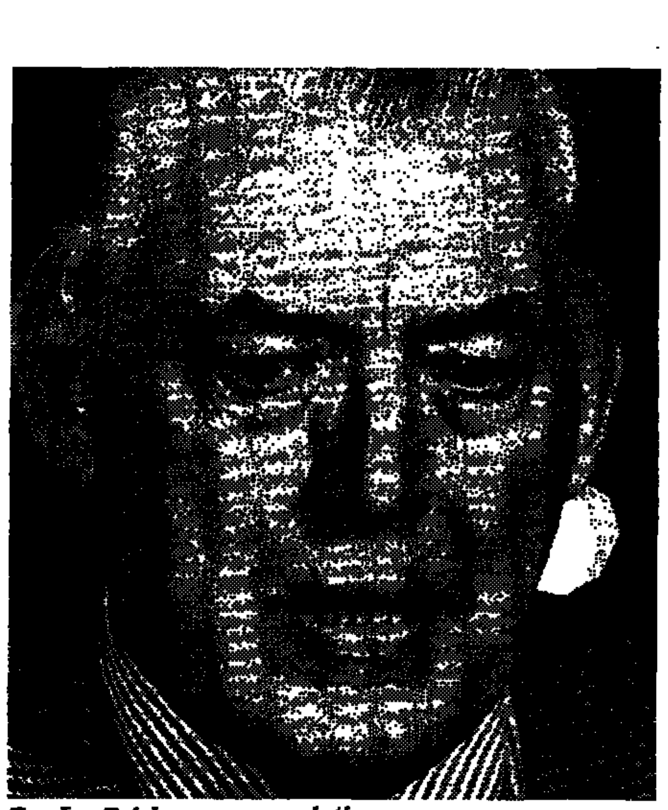
"THERE is a way out of this impasse," rasped the Rev Ian Paisley, the voluable and monumental leader of Northern Ireland's Democratic Unionist Party. He was dressed in an elephant grey suit with waistcoat as he stood beside his car outside Stormont parliament buildings near Belfast.

He insisted that the ultimatum set by Mr Peter Brooke, Northern Ireland secretary, should be withdrawn. "It is an ultimatum agreed with Dublin; it is Dublin's ultimatum," Mr Paisley said, hardening his 'a's so his last word grated with menace. Mr Paisley was being simplistic – and knew it.

There were no easy solutions yesterday to the improbable arguments which have wrecked Mr Brooke's talks initiative. Instead there were lengthy, inconclusive, bilateral meetings to clarify what had been agreed at last week's meeting between Unionist leaders and the prime minister. An air of futility has descended over the grandiloquent but little used parliament buildings at Stormont – a symbol of the past pretensions of Northern Ireland's political leaders.

The dispute is over Mr Brooke's proposals for the second stage of talks, when the government of the Irish Republic will enter negotiations. Who has a veto over the independent chairman? Where precisely will they take place in Northern Ireland? How much has to be agreed before the first strand of talks – on a devolved government – can proceed? The nationalist Social Democratic and Labour Party was deliberately reticent – as if confident of the Unionists proving their own worst enemies.

"Hope springs eternal," said Mr Seamus Mallon, deputy leader of the SDLP. Their position was the same as it had been before the Unionists' flight to London for talks with Mr John Major, Britain's prime minister.


Rev Ian Paisley: no easy solutions

Mr Paisley and his ally, Mr James Molyneaux, leader of the Ulster Unionists, had arrived far earlier than required, showing their willingness to embark on the "round-table" talks. Their strategy, at least in the eyes of opponents, relies on bluster and cunning to put the blame squarely on other participants. "There will be a lot of hard work being done here," said Mr Molyneaux without a hint of irony. "We will not be hanging about, we have business to do." Mr Paisley added: I expect to be talking to whoever wants to talk to me." – an unlikely comment in any other context from someone so strongly opposed to powersharing.

Inside, a frustrated Mr Brooke chaired meetings first with the SDLP and Alliance Party, then with the Unionists. And then with the SDLP and Alliance parties once more. Church and political leaders have expressed dismay.

Mr Bill McCourt, chairman of the Northern Ireland Confederation of British Industry and the two primates of All Ireland joined others in signing a statement saying: "Many would regard it as demonstrating a sad lack of commitment if the participants were unable even to devise adequate procedures for talks." There were reports, too, of security forces fearing a surge in terrorism if talks collapse. But not even an alliance of industry, the military and the church can change fixed minds.

Chernobyl study rejects illness reports

Continued from Page 1

studied 28 Soviet settlements which had been contaminated to different degrees with radioactive fallout, and seven uncontaminated settlements as controls. They covered areas in which the population is officially put at 825,000.

The project involved nearly 50 missions to the Soviet Union and what the report calls "open and frank conversations with authorities, scientists and especially local citizens that greatly helped the international experts' understanding of the situation".

The main conclusions of the report were:

- That it could not directly attribute any health disorders to radiation exposure, and there were no indications of an increase in the number of cases of leukaemia or cancers;
- That there are significant health disorders – not related to radiation – both in areas contaminated by fallout and in uncontaminated areas;
- The populace suffers widespread worry and stress, which the study puts down to high levels of uncertainly and the threat of evacuation;
- The early actions of the Soviet authorities were "broadly reasonable" and in line with international guidelines;
- Protective measures taken or planned for the longer term appear more stringent than the experts believe is strictly necessary;
- Official procedures used by the Soviet authorities for estimating radiation doses were scientifically sound;
- Measurement and assessments made by the study group generally corroborate official figures for fallout.

The report says the size of their task became clear when an international expert team first interviewed people from the three republics in Kiev: "Anxiety about children's health and worries over the adequacy of the government's proposed measures for limiting the radiation exposures over their lifetime dominated the discussion."

Zulus agree to curb use of 'cultural weapons'

By Patti Waldmeir in Johannesburg

PRESIDENT F. W. de Klerk of South Africa appears to have won an important concession from Zulu leaders on the carrying of tribal weapons in black townships, paving the way for relations to be restored between the government and the African National Congress (ANC).

Last night, Mr de Klerk and Chief Mangosuthu Buthelezi, leader of the mainly Zulu Inkatha Freedom Party, said in a joint statement after talks at Ulundi, capital of the KwaZulu homeland, that they had reached an accord on the carrying of so-called "cultural weapons" in areas of unrest. The talks also included the Zulu King Goodwill Zwelithini.

The accord was understood to include a ban on the carrying of spears at political and other gatherings, although such weapons could still be carried at carefully defined "cultural occasions".

Pretoria's failure to impose a ban on spears prompted the ANC's decision on Saturday to boycott talks on a post-apartheid constitution. The ANC could still object to the definition of a cultural occasion agreed by Mr de Klerk and Chief Buthelezi – but yesterday's accord should form the basis for a deal between the ANC and government.

Once the two sides have resolved their dispute over cultural weapons, the ANC will demand further action from the government to end violence.

The ANC is insisting that it will not agree to enter constitutional talks until four other areas of disagreement are resolved: over the powers of a planned commission of enquiry into violence; over the disciplining of police officers involved in township killings; over the disbanding of counter-insurgency units; and over the organisation's demand that two security ministers be sacked.

The ANC's boycott of constitutional talks is largely a symbolic action and is likely to lead to no major setback in the already protracted peace process: constitutional negotiations have yet to begin in any case and no progress had been expected before the ANC elects a new leadership at a conference in early July.

The ANC's decision to stay away from a peace summit planned for later this week is more significant. The organisation's leaders reject the conference because they say the government's own police force is a major belligerent in the violence.

Land claim decision, Page 6

WORLDWIDE WEATHER

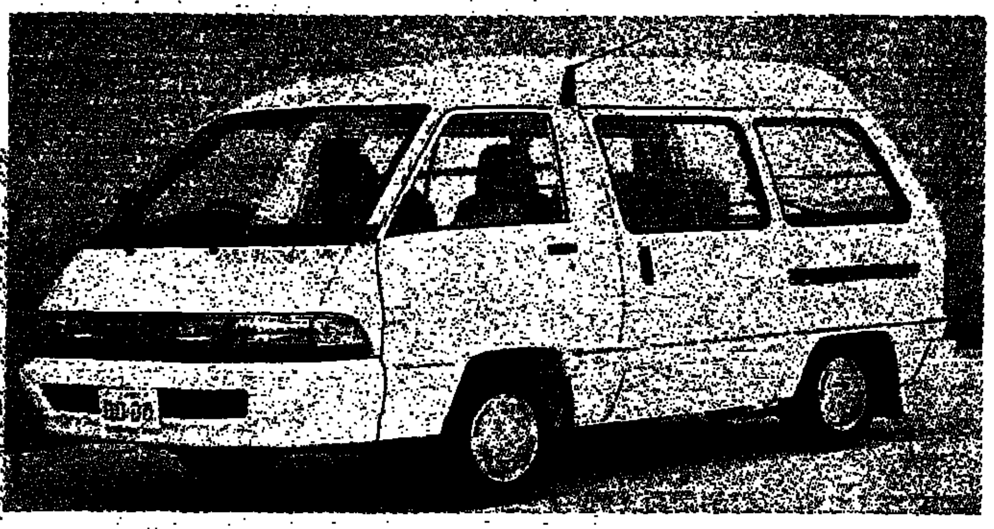
		°C	°F			°C	°F			°C	°F			°C	°F			°C	°F
Ajaccio	S	18	64	Berlin	C	17	63	Caracas	F	29	84	Faro	S	22	72	Islamabad	C	31	88
Algiers	S	21	70	Biarritz	C	15	59	Casablanca	S	23	73	Florence	R	17	63	Istanbul	F	18	64
Amsterdam	C	14	57	Bombay	C	33	91	Chicago	S	13	55	Frankfurt	C	17	63	Jakarta	C	33	91
Athens	T	20	68	Bordeaux	C	19	66	Cologne	F	19	66	Geneva	S	18	64	Jersey	C	12	54
Bahrain	S	31	88	Boulogne	C	14	57	Copenhagen	F	15	59	Gibraltar	S	21	70	Johannesburg	S	20	68
Bangkok	F	36	97	Brussels	C	15	59	Corfu	S	18	64	Glasgow	Dr	12	54	Lima	F	23	74
Barcelona	S	17	63	Budapest	F	16	61	Dallas	F	21	70	Helsinki	R	11	52	Lisbon	S	26	79
Beirut	C	23	73	Buenos Aires	F	26	78	Dublin	C	18	64	Hong Kong	F	30	86	London	C	17	63
Belfast	C	15	59	Cairo	S	34	93	Dubrovnik	S	18	64	Innsbruck	F	12	54	Los Angeles	S	11	52
Belgrade	C	12	54	Cape Town	C	16	61	Edinburgh	C	16	61	Inverness	C	14	57	Luxembourg	C	16	61

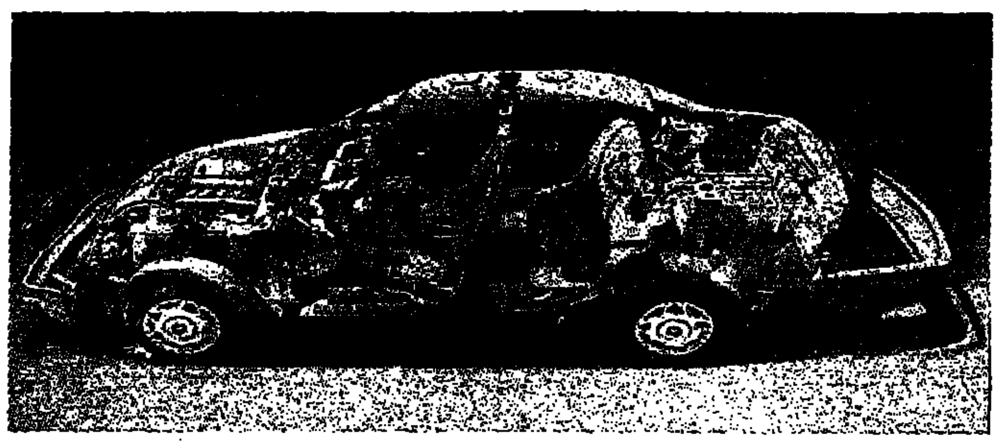
		°C	°F			°C	°F			°C	°F			°C	°F			°C	°F
Madeira	S	19	66	Milan	S	16	61	Nicosia	F	31	88	Salzburg	F	13	55	Tenerife	S	23	73
Madrid	S	21	70	Montreal	S	13	55	Oporto	S	25	77	San Francisco	C	10	50	Tokyo	F	25	77
Majorca	S	20	68	Moscow	C	17	63	Oslo	F	15	59	Seoul	F	30	86	Toronto	F	17	63
Malaga	S	21	70	Munich	F	13	55	Paris	F	19	66	Singapore	R	27	81	Tunis	F	19	66
Malta	S	20	68	Nairobi	C	20	68	Peking	S	29	84	Stockholm	R	17	63	Valencia	F	20	68
Manchester	C	16	61	Naples	F	19	66	Prague	S	17	63	Strasbourg	S	17	63	Venice	S	18	64
Manila	F	36	97	Nassau	C	29	84	Reykjavik	F	6	43	Sydney	R	17	63	Vienna	F	16	61
Melbourne	S	12	54	New Delhi	F	36	97	Rhodes	F	20	68	Taipei	F	32	90	Warsaw	C	11	52
Mexico City	C	28	82	New York	F	19	66	Rio de Janeiro	R	28	82	Tangier	S	23	73	Washington	F	12	54
Miami	R	27	81	Nice	S	18	64	Rome	F	21	70	Tel Aviv	C	23	73	Zurich	C	15	59

Temperatures at midday yesterday C-Cloudy Dr-Drizzle F-Fair Fg-Fog H-Hail R-Rain S-Sunny Sl-Sleet Sn-Snow T-Thunder

CAR OF THE FUTURE

Tuesday May 21 1991





Toyota's leisure van (left) qualifies as a Californian "ZEV" (zero emission vehicle) and cruises at up to 85 kph for more than 100 kilometres on its nickel cadmium battery pack. BMW's new 3 Series (above) points the way to easier recycling

Environmental issues will be as important as technological advances in shaping the car of the future, writes **John Griffiths.** Concern has grown over exhaust emissions as more vehicles take to congested roads. Will new solutions be found to ease traffic flows?

Target for a health drive

CONCERN about atmospheric pollution, global warming and traffic congestion, allied to *sombre images of Kuwait's* burning oil wells, ensure that future cars will be shaped as much by legislation as by consumer preferences.

Memories of fuel queues in the 1970s oil crises proved short-lived. The world's car industry quickly found itself catering to the demands of motorists reverting to old habits of concentrating on style, comfort and performance, rather than energy saving or *exhaust emissions.*

As a result, the considerable strides the industry has made in weight-saving, "slippery" aerodynamics and engine efficiency have been partially obscured by consumer demand for better equipment and trim, so that most cars are as heavy as a decade ago.

US administrations have continued to duck the measure that could most readily curb the world's most profligate vehicle fuel users – a gasoline tax lifting the current $1 a gallon closer to the $4 level paid by most of the world.

Yet California, in particular is providing the main catalyst for change in the car of the future, at least in terms of air pollution and the controversial issue of global warming.

From 1994, under Californian state legislation, the percentage of vehicles with drastically reduced exhaust emissions must rise every year under a programme lasting until the *year 2010. In 1994, 10 per cent* of cars sold must be "transitional low emission vehicles". From 1995, "ultra low emission vehicles" must start appearing and from 1998 2 per cent of sales must be of battery-powered cars, rising to 10 per cent by the year 2003.

That means around 100,000 electric vehicles a year and the birth of a new industry.

These standards are aimed at sharply reducing the carbon monoxide, hydrocarbon and nitrogen oxides emissions which often reduce Los *Angeles air to atmospheric* soup. Their technical feasibility remains uncertain – even allowing for the ritual protests of an industry faced with spending billions in attempting to comply with them.

Yet their effect, and the motor industry's uneasy awareness that where California leads, the rest of the world tends to follow, is to set manufacturers hunting hard for cost-effective technical and engineering solutions.

Many will be made possible only by yet more intensive use of electronics, a major growth area for vehicle component makers and specialist electronic groups. The continuing integration of the car's various systems, such as engine management, suspension and even steering under central electronic control will have made the "intelligent" car a market reality by the year 2,000.

Engine research is remarkable in its variety. Toyota, for *example, has a 2.5 litre, super*charged diesel engine capable of hurling a limousine around a test track at over 100mph. It emits only about a third the level of nitrogen oxides – the *culprit in acid rain* – of conventional engines.

Also being developed are "flexible fuel" engines running on petrol or "cleaner" fuels such as methanol, two-stroke petrol engines less than half as big as conventional four-strokes, and even gas turbines.

All, however, have their drawbacks and none is certain of meeting all California legislation at viable cost. Diesels, for example, are economical and cleaner than petrol engines – except for almost certainly needing traps to cap*ture tiny particles suspected of* causing cancer.

Electric vehicles offer the biggest challenge of all, because of current batteries' inability to store large amounts of energy.

Ricardo Consulting Engineers, the UK engineering consultancy, may have the answer: on-board batteries and generator, partially powered and recharged by a small diesel engine. It would be driven by electric motors in each wheel, with the brakes forming an integral part of the motor and generating top-up power.

The main disadvantage – the heavy, unsprung wheels ruining ride and handling – can be overcome by component miniaturisation, says Ricardo.

Some industry figures doubt the value of much of this effort. US makers argue that the $600 a car needed marginally to refine catalytic converters, under the latest US Clean Air Act, would be better spent tuning up older cars, which account for about 85 per cent of vehicle pollution.

Dr Heiko Barske, Volkswagen's research chief, also suggests that Americans would be much better off "driving one litre cars, not four litres". What particularly annoys him is threats to impose draconian fuel economy targets on the *industry, "and yet, when a Golf* is perfect for driving around the city, these same politicians are all ordering the new S-class Mercedes which consumes 22 litres per 100 kilometres".

In the mid-1980s, VW tried to launch the Eco-Golf, fitted with electronic clutch. When stationary, the engine automatically switched off, restarting automatically if a gear was re-engaged. Since most urban *exhaust pollution is generated* in traffic jams, its benefits were obvious. Yet motorists were unwilling slightly to alter driving habits. VW will try again next year.

With the world car population expected to increase by about a third to 500m by the year 2025, car makers must run hard just to stand still in terms of pollutants. Dealing with traffic congestion will also be a major challenge.

Integrated traffic information systems will help to keep traffic flowing freely, but only marginally because easier traffic flows simply create more journeys.

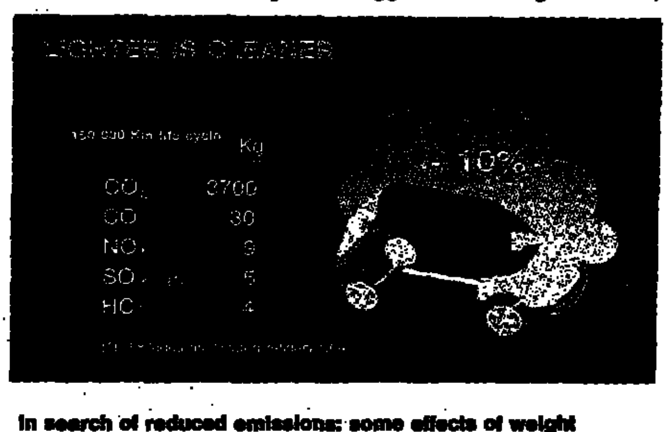
Such systems are already in pilot use in the UK and Germany. Apart from route guid*ance, eventually they will pro*vide localised information, via in-car terminals, such as whether and where there is a parking space free at the driver's destination area, the time between trains and so on.

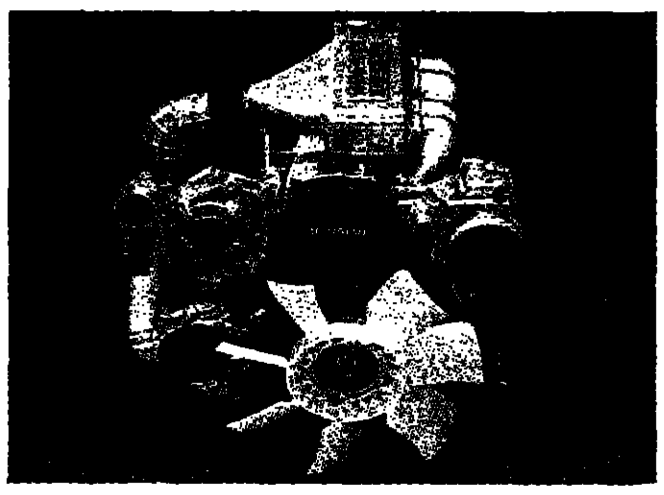
These issues, along with safety and how to halve Europe's traffic fatalities, are at the heart of Prometheus, an EC motor industry research programme on which some 300 scientists are engaged.

Several years on, it has found no instant solutions. "Yet it has been successful in that it has made clear all solutions are likely to be long-term," says VW's Dr Barske.

As just one example, independent groups had previously been working on systems capable of "seeing" through poor visibility, and thus providing drivers with a potentially valuable safety aid. One was based on infra-red, the other on ultraviolet. Thanks to Prometheus, it is now known that an effec*tive system must use both.*

Controversy continues on other Prometheus aspects, such as whether motorway "convoys" can make better use of available road space, with the space between cars controlled electronically, not by drivers. That is technically feasible, but some companies, including BMW, have already made clear their resistance to anything but an advisory system – partly because of product liability issues involved.





In search of reduced emissions: some effects of weight saving (above) and Toyota's S-2 supercharged, two-stroke diesel engine (right) which, the company says, holds out *the prospect of meeting stiff exhaust emissions legislation*

IN THIS SURVEY

Editorial production
Gabriel Bowman

John Griffiths looks at the extensive Saturn project in Tennessee

GM's $4bn plastics path

WITH THE launch of General Motors' $4bn Saturn project last year, plastic composites reached a new threshold in terms of their use in volume car applications.

The Saturn cars, built at a greenfield site in Tennessee and aimed at rivalling Japanese cars for quality and cost, break new ground in having bodies made up of thermoplastic vertical panels hung on a steel spaceframe, instead of a conventional steel monocoque.

No less significantly, Saturn capacity – unlikely to be used immediately because of the depressed US car market – is 330,000 cars a year, an unprecedented volume for a vehicle making such extensive use of plastic composites.

Yet Saturn is only the latest of several vehicles to make extensive use of such materials to be developed by GM, which to date has shown by far the greatest commitment of all vehicle makers to exploring the possibilities presented by plastics.

It also has in production a range of multi-purpose leisure vehicles, such as the Chevrolet Lumina minivan, which uses plastic body panels on a steel spaceframe and capacity for which is over 200,000 units a year. The Lumina is a successor to the Pontiac Fiero mid-engined sports car of the mid-1980s, whose plastic-clad body reached a peak production of around 100,000 units annually.

Saturn differs from its predecessors not just in volume, but in having its panels made of thermoplastics rather than thermoset materials. The differences are fundamental. Thermosets take longer to process and when the vehicle's life is over, the panels can only be chopped up for road fill or other low-grade uses, or burned to create energy.

Thermoplastics allow shorter cycle times to produce components, and can be melted down and reused, although usually also in lower grade products.

Yet even the most ardent advocates of the use of plastics in vehicles, notably the large chemicals groups themselves, are not suggesting that the car of the future will consist primarily of composites, with metal reduced to mechanical roles.

GM, starting with a completely "greenfield" project, has been able to maximise the advantages of composites to an extent to offset the still severe disadvantages – most notably slow cycle times to produce components and cost.

Thus the Saturn project has gained from the lower tooling costs to produce plastic panels compared with stamping steel, reduced lead times, the ability to mould in one piece a complex body part which otherwise might require the welding together of four or five separate metal pressings and – as a result – actual reductions in component costs.

Other bonuses, to be felt in the marketplace, include increased resistance to damage and corrosion and – because of cheaper tooling and construction techniques – the ability to update models with greater frequency more cheaply.

So far, GM's main rivals show little intention of following it down the same path. They remain unconvinced that the benefits are worth such a large-scale effort and are adopting a "wait and see" approach on how the GM products fare.

Similar caution is being shown by the industries of Europe and Japan. Renault is the only major manufacturer to have developed a plastic-panelled vehicle in anything approaching high volume –

Even ardent advocates do not suggest cars will consist primarily of composites

around 60,000 units year – and the vehicle itself, the Espace multi-purpose vehicle, is relatively expensive. In Japan, Toyota and Mazda are among manufacturers suggesting that there is a long way to go yet before plastic bodies seriously rival steel.

A key extra consideration for the European and Japanese industries is the much higher cost, by comparison with North America, of the main raw material for plastics, oil.

The prospect of a plastic composite body completely supplanting steel, to which engine, gearbox and other major components would be mounted directly is even more remote, acknowledges Dr Claude Fussler, vice-president, automotive materials, of US chemicals giant Dow Europe.

However, Dr Fussler and others in the industry do envisage continuing steady inroads by composites in a number of areas. One such, exemplified in the new BMW 3 Series, is the substitution of the metal bumper girder by much lighter composites, with a saving of around 15 kilogrammes at each end of the car.

Composite valve covers are continuing to replace those made from steel and aluminium. More significantly yet, work is well advanced on structural composites for use in load-bearing components at the end of the 1990s. These include engine supports, cross-members and similar items – many of which can also be produced as a single part instead of fabricated from a number of metal components.

GKN, the UK engineering group, has been supplying truck springs made of lightweight composite materials for some years. With composite road wheels, likely to weigh less than half of their steel equivalents, *also* in prospect, calculations made by Dow suggest that the use of composites could cut the weight of a typical European car by 175 kilogrammes – including the "knock-on" effects of being able to use lighter metal components – without resorting to an all-plastic body.

This would produce significant "whole-life" energy savings compared with a conventional car, if reduced engine in manufacture and improved fuel consumption were taken into account.

A possible catalyst for the speedier introduction of plastic-bodied cars may come in the form of Californian legislation requiring a percentage of cars on the roads to be battery-powered by the late 1990s. Manufacturers of such vehicles will be keen to compensate for heavy battery weight by using the lightest bodies possible. The plastics industry is already engaged in tentative talks in this area with potential electric vehicle suppliers.

The problem remains of how to get plastic component cycle times down.

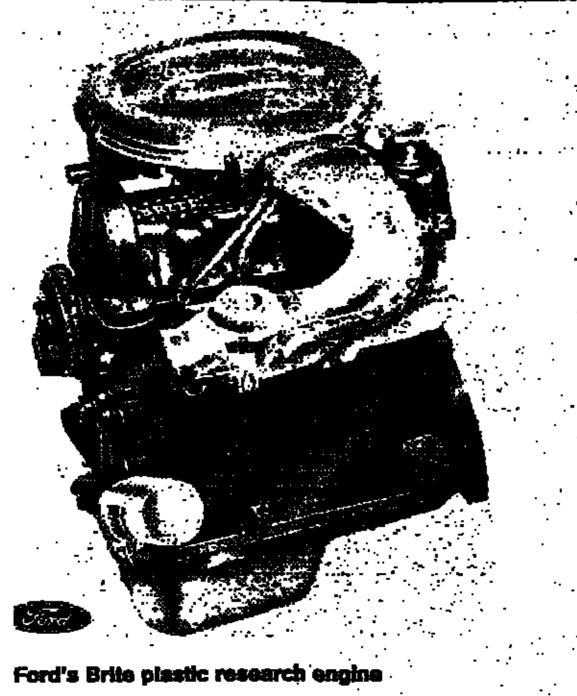
With reaction injection moulding, times for some large components like front wings are already down into the 50-53 second bracket – still an inordinately long time compared with the few seconds to *stamp sheet metal. It is possible to compensate* partially by replicating the cheaper plastic tooling. There are limits, however. Doubling up would be economical but a third plastics line would be more expensive than one metal stamping line.

Nevertheless, the industry claims itself to have been very encouraged by the outcome of the Saturn project so far.

Part of the plastic industry's reason for optimism about the long-term prospects is also the appeal of the material to vehicle designers, and the greater flexibility of approach offered compared with steel.

Recycling, however, remains a problem for neither thermosets nor thermoplastics have the easy recyclability of metals, virtually 100 per cent of which are already recovered. "There is a lot of work still to be done," acknowledges Dr Fussler, "but we are making progress."

Bumpers, for example, are already being virtually completely recycled, with new bumpers simply moulded from the old with little addition of new materials. Exactly how many times this can be done, however, remains unknown.



Ford's Brite plastic research engine

John Griffiths on new projects

Cleaning up the engine

THE CAR of the late 1990s will *be required by law to pollute* less – including noise as well as exhaust emissions – and travel much further than now on a gallon of petrol or diesel.

The result is a scramble by vehicle and engine makers to produce power units capable of meeting such demands, and the emergence of new technical approaches to the issue.

Many of the projects now under way, such as an engine with plastic components developed by a European consortium led by Ford, are aimed more at investigating design areas such as weight-saving than for commercial production. The "Brite" engine, named after the acronym for the co-operative EC research programme Basic Research in Industrial Technology for Europe, uses metal only for the combustion chambers, cylinders and moving mechanical parts. It generates 30 per cent less noise than a conventional *engine of similar size.*

But other radical units, such as the Orbital two-stroke engine first developed by Sarich Technologies of Australia, offering more power and about a third the weight of a conventional petrol engine, *are* intended for production.

Indeed Ford, which took out a licence on the technology some time ago and has been developing it jointly with the Sarich group, says it expects to put a vehicle so equipped on the market before the end of the decade. General Motors has declared a similar intention.

To meet the expected demand, Orbital Engine Corporation (US), a wholly-owned Sarich Technologies subsidiary, is preparing a facility to produce 100,000 Orbital engines a year at Tecumseh, Michigan.

The engine, which lacks valves and has direct fuel injection, is claimed to have 10 per cent more power and 20 per cent better fuel economy than a comparable-capacity conventional engine.

Of potentially greater significance, Orbital says it has developed a vehicle for testing by the federal regulatory authorities in the US and which is claimed to be capable of meeting the strictest emissions standards proposed for the US for the year 2004 and even California's standards for Ultra Low Emission Vehicles.

Among other candidates – apart from electric power units – are two-stroke supercharged diesels, supercharged two-stroke petrol engines with extremely high power outputs relative to their weight, engines capable of running on a variety of "clean" fuels such as methanol, gas turbines and further developments of the "lean-burn" engine.

Used in conjunction with a catalytic converter, the "lean-burn" engine holds out the prospect – according to Toyota – of meeting the stiffest exhaust emissions legislation at the same time as providing fuel economy.

Even in respect of conventional petrol or diesel engines, work on aspects of their operation holds the promise of significant performance improvements on all fronts.

For example, electronic technology in conjunction with very high-speed hydraulic pumps is allowing Lotus Engineering, the engineering consultancy arm of General Motors' Group Lotus subsidiary, to develop "active" control of the engine's inlet or exhaust valve operation.

The system, as described by Mr Hugh Kemp, powertrain and systems director, is intended as a research tool rather than a production item for the foreseeable future because of its high cost. The valve is attached directly to a vertically-acting hydraulic pump which, under digital control, can open the valve many times a second to any chosen extent and at any chosen phase of the engine cycle.

What Lotus has created is, in effect, an infinitely variable camshaft. Since it is the camshaft which determines an engine's main power and torque characteristics, Lotus is equipping *itself with a* valuable tool capable of short-cutting much "trial and error" traditional engine development.

The system might be seen as the ultimate development of a simpler approach developed by the Norfolk-based group, in which the engine camshaft has two profiles side-by-side, with the engine switching between the two for optimum high or low-speed performance. Other "variable" engine parameters being adopted include variable valve timing, and even compression ratios.

Only last month Ricardo Consulting Engineers, the UK engineering consultancy, unveiled a new form of variable valve timing mechanism applicable to any configuration of engine, including multi-valve units and those using either pushrod or overhead camshaft valve operation.

By means of such innovations the motor industry hopes *to be able* to meet increasingly harsh legislative pressures. In the US these include an expected improvement in mandatory corporate average fuel economy (CAFE) – the average obtained by the entire range of models a manufacturer has on sale – from the current 27.5 miles per gallon to 34-45 mpg in the period 1995-2000.

A more than halving of currently permitted exhaust emissions of hydrocarbons, carbon monoxide and oxides of nitrogen, coupled with possible attempts to restrict the volume of carbon dioxide – the main gas linked with controversial, and as yet not wholly proven, "greenhouse effect" – is also expected to tax engine development engineers. Currently, under US legislation cars are required to comply fully with emissions standards for 50,000 miles or five years. But a move to 100,000 miles and 10 years is regarded as inevitable.

Not least, with some countries like Switzerland already imposing "drive-past" noise tests, the industry is braced for similar legislation becoming much more widespread, with a possible requirement for external noise levels to be reduced to as low as 73 decibels (dbA). In subjective terms, this would be about one quarter of the sound level of most existing legislation of around 77 dbA.

World charges down route to electric vehicles

A MONTH ago, several oddly-shaped vehicles were to be seen not so much winding as whining their way round part of the large complex which makes up Toyota's technical centre and proving ground of Higashi-Fuji, in the shadow of Mount Fuji.

They were a light two-seater car, a motor caravan and a bus, and they whined because they were powered exclusively by batteries.

They were put on display to European journalists by Toyota as yet one more piece of evidence that the world's motor industry is moving reluctantly, yet resignedly, towards developing viable electric vehicles.

Toyota is by no means alone among Japanese vehicle makers in travelling down the "EV" route. Among others, Nissan has developed an electric hatchback, Mazda and Daihatsu several light cars and commercial vehicles. Even Nippon Steel has produced a purpose-built battery car with ultra-lightweight carbon fibre body, with lead acid batteries driving electric motors mounted within each wheel, and is looking for partners to develop it further.

As usual in Japan, a consortium approach is also being *adopted* in some areas, including the development of batteries under the aegis of the New Energy Development Organisation, part of Japan's governmental energy agency.

The consortium includes Japan Storage, part of GS, which is developing nickel-zinc and nickel cadmium batteries; Yuasa (nickel-zinc and sodium-sulphur); Meidensha (zinc-bromine) and Farukawa (nickel-iron). Toyota has developed its own zinc-bromide system in house but is using Meidensha on some of its development.

As with the industries of North America and Europe, the renewed drive inside Japan for more effective solutions to the electric vehicle's century-old problems of low performance and short range is motivated not so much by a desire to explore new markets as a desire not to be excluded from one – namely California's.

Under legislation prepared by the Californian state government – and which is subject to biennial review to ensure that what is required is technologically feasible – a significant population of electric cars will be required from 1998 as part of a drive to reduce air pollution in the smog-shrouded Los Angeles basin, in particular.

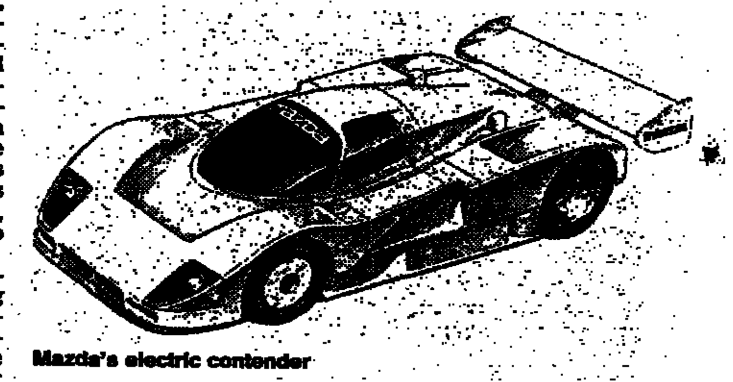
The Californian legislation requires 2 per cent of all cars, vans and light trucks sold in the state in 1998 to be "zero emission" vehicles (ZEVs), rising to 10 per cent in the year 2003.

Barring the emergence of some unexpected new technology, "ZEVs" can only mean electrically-powered cars – 30,000 in 1998, rising to 150,000 a year in 2003.

Manufacturers which do not develop such ZEVs, and various other categories of low-emission (LEV) and ultra-low emission (ULEV) cars face exclusion from California's 1m-plus cars a year market.

The compensation for manufacturers for the large development spending inevitably involved is that at least the numbers of vehicles required to be sold should generate just enough economies of scale to make such vehicles viable, rather than merely "loss leaders".

The world industry is taking the issue seriously, mindful of the fact that Californian environmental legislation has tended strongly to influence legislators in other developed regions of the world.



Mazda's electric contender

The task confronting the industry involves spending billions of dollars. General Motors, Ford and Chrysler recently agreed a programme with the US federal government under which more than $1.2bn is to be spent over 12 years to develop advanced battery technologies.

Development of vehicles themselves is proceeding apace. General Motors has already designated a plant at Lansing, Michigan, to manufacture a car based on the Impact, a prototype already shown to be capable of up to 100 mph and a range of 120 miles. The plant is due to come on stream in late 1993.

Ford also says it is "definitely in the EV business for 1998" and next year is to start building a *fleet of 100 electric* vans to gain manufacturing experience.

Perhaps the most advanced EV project in terms of meeting the legislation's deadlines, however, is being undertaken in the UK, at Worthing. It is a car, the LA 301, which is being designed and developed by International Automotive Design (IAD), one of the world's largest vehicle engineering consultancies, on behalf of Clean Air Transport, an Anglo-Swedish group which has won a contract to supply 3,500 such cars, starting next year, under the "Los Angeles Initiative".

Drawn up by Los Angeles city council with the support of the region's utilities and clean air board, the initiative aims to put 10,000 electric vehicles on the region's roads by 1995, as a precursor to the legislation coming into effect. The city council itself is not buying the vehicles, but is helping to market them to utilities, businesses and other potential operators.

The city council, LA Water and Power and Southern California Edison so far have contributed more than £7m to the LA 301's development, representing about a third of the project cost. Canadian-built electric vans are also involved in the initiative.

Initial production is to be in the UK, at a rate of up to 3,000 a year. But the manufacturing operation is expected to move to Los Angeles itself in 1993, with predictions that output of the $25,000, executive car-sized vehicle – complete with air conditioning – will be produced at the rate of 15,000 a year from the mid-1990s.

Sir John Samuel, the CAT director responsible for the project, says that the LA 301, which is a "hybrid" using a small internal combustion engine to recharge the vehicle's batteries outside of the city centre, will not and cannot be a full replacement for a conventional car.

The thinking is that there are enough wealthy buyers, and three- or four-vehicle families, in southern California prepared to buy a "clean" car specifically for around-town use, reverting to a conventional car for inter-city journeys.

Critics of the Californian "EV" drive argue that such vehicles merely move the air pollution problem "upstream", in that if the energy to recharge EV batteries is produced by fossil-fuelled power stations, there is little or no net gain in terms of the production of carbon dioxide, seen as a contributor to global warming, or pollutants such as carbon monoxide and hydrocarbons. However, LA officials *claim that* the extra power station emissions involved would still leave Los Angeles's air 97 per cent cleaner.

John Griffiths

TYRE TECHNOLOGY

Good ideas slow to take off

IT IS possible that the car of the future will run on tyres colour-matched to the car and produced in a few seconds by an injection-moulding machine. When worn out, such thinking goes, they will simply be fed into a melting pot and the material re-injected to form another tyre, perhaps even at the local tyre dealer.

Such a scenario was being painted with some enthusiasm in the late 1980s by a few companies excited by the properties of polyurethane compounds, and some bicycle tyres and lightweight industrial tyres of this type already exist.

But for the far more demanding application of car tyres, it remains highly unlikely in the absence of spectacular new advances in both materials and moulding techniques, according to senior tyre industry research and development executives.

"Obviously, we're staying up-to-date with what's going on in that area," says Mr Barry Allbert, technical director at Pirelli UK. "But we're doing it via subcontracts with third parties. We certainly haven't seen anything yet which makes us want to start a serious development programme."

Mr Allbert's views are shared by all the major tyre companies, the five largest of which – led by Bridgestone of Japan – account for over 80 per cent of the more than 400m car tyres produced annually.

From Goodyear's vast technical centre, employing 1,000 R&D personnel at Akron, Ohio, to the intensely secretive laboratories of the Michelin group at Clermont-Ferrand in France, the conviction persists that the future of the tyre lies in further development of existing tyre technologies and processes.

Consumers themselves have shown a marked indifference to innovation. The failure of a succession of "run-flat" tyres, which prevent catastrophic blow-outs in case of puncture, to win wide acceptance has left Dunlop and, more latterly Continental, deflated.

Whether Michelin will have more success with another radical project, its "mousse", only time will tell. The concept entails replacing the inflated air inside the tyre with a lightweight compound, rendering it puncture-proof. It has already been proved at the highest levels of motor sport. Michelin's problem now, still some way from being resolved, is how to adapt it to volume production at acceptable cost.

Another seemingly good idea, twin tyres at each corner, to allow high-performance cornering without the aquaplaning on wet roads to which single high performance tyres are subject, has failed to catch on. Audi recently shelved one such joint twin-tyre development with Goodyear at the latter's Luxembourg technical centre.

The main challenges facing the tyre industry are much more fundamental, if less entertaining to the imagination.

Among the biggest is coping with the far greater variety of new models being introduced by car makers. According to Mr Allbert of Pirelli, the range of tyres produced for cars has more than doubled since the early 1970s. With the car market continuing to be broken up into more niches at an increasing rate, the only prospect for tyre makers is to produce yet more tyre types in yet greater variety of sizes.

Computerisation and other new technologies are at least making the task more manageable, with tyre makers building ever larger databases of compounds, reinforcements and structures, and how they interrelate.

To some extent, therefore, they can use their databases to computer "model" a new tyre to achieve the desired characteristics, and predict its behaviour without going through – as in the past – a very lengthy prototype development process.

However, such is the complexity of the dynamic behaviour of a car on the road and the stresses involved that the need for physical testing remains.

"Noise, we understand pretty well. But ride and handling are not yet computer-modelled to a satisfactory extent, so the final tuning of the tyre and vehicle combination is still subjective," says Mr Allbert.

A Goodyear design engineer takes the measure of a concept tyre tread at the company's Akron, Ohio, technical centre

Thus probably the final 10 per cent of the performance of a tyre is optimised by skilled drivers on test trucks, in what is acknowledged to be a subjective manner. So intense is the competition between manufacturers that this 10 per cent is definitive – and certainly holds the key to success in the high-performance, low-profile car tyre market, which is the only segment of world tyre sales enjoying significant growth levels.

Outright performance, however, is seen by some leading figures as slipping slightly down the list of priorities, with reduced rolling resistance assuming more importance in the face of pending US federal corporate average fuel economy (CAFE) legislation requiring sharply improved fuel economy from vehicles over the next decade.

The industry's senior R & D figures do not rule out completely the possibility that tyres one day might be developed wholly by computer. But no-one should really believe it, they suggest, until the industry stops using or building test tracks.

Even supercomputers, it is suggested, need to progress beyond their present state to be able to create an adequate model for the dynamic behaviour of tyres under stress.

Perhaps the biggest single headache is the development of flexible automation processes capable of building a wide variety of tyres. Traditionally, tyre manufacturing has been a labour-intensive process, with much of the tyre built up by hand because of the many different materials involved. However, equipment increasingly capable of allowing a manufacturer to build a variety of tyres at one assembly station, using a high degree of automation, is gradually being introduced and promises substantial help to ease the cost pressures under which tyre makers are increasingly being placed by vehicle makers.

Pressure is mounting, too, from governments and the EC Commission in Brussels, for the tyre industry to come up with proposals for improved recycling of old tyres.

The ideal solution to the industry's problems would be a devulcanising process allowing the tyres' original ingredients to be reclaimed.

In its absence – there is little indication that such a process will ever emerge – it is expected that there will be further growth in the number of plants capable of burning tyres in closed furnaces to provide energy for other industrial and commercial plants.

Some other uses are being found, such as tyres ground into granules for road bed filler, and for putting unseen spring into football pitch and tennis court sub-surfaces.

However, these are relatively marginal uses and the European Commission has invited tyre makers to take part in a working group to discuss formation of a much more comprehensive programme for disposing of used tyres.

The issue is of increasing concern to governments. In the UK, for example, a report compiled by management consultants KPMG Peat Marwick McLintock, commissioned by the government, recommends a system of disposal fees as well as "tyres-to-energy" power plants as the best ways of dealing with scrap tyres, tens of millions of which currently occupy landfill sites, gently leeching pollutants into the soil or, even worse, catching fire.

Large-scale tyre dump fires are all but inextinguishable, and have been known to burn for more than a year.

John Griffiths

ALTERNATIVE TRANSMISSIONS

Nearest thing to a breakthrough

THE OBSERVATION of one motor industry pioneer that the manual gearbox was crude, but it worked, is almost as apt today.

A century of continuous development has given us virtually foolproof clutches and gearboxes which can be shifted with one fingertip but the working principle remains unaltered.

This century has seen no lack of alternatives. Only two have gained any kind of acceptance in the vehicle world: the conventional automatic transmission and the continuously variable transmission (CVT).

The automatic has been with us since 1940; the CVT since the late 1950s. Both have been steadily developed. The automatic now comes with electronic instead of hydro-mechanical control, and with more ratios. The latest European and Japanese transmissions now employ five forward speeds.

The CVT has a more chequered history but the units now in production, in such vehicles as the Fiat Tipo, Ford Escort and some of their Japanese equivalents, are a far cry from the original rubber-belted Van Doorne Variomatic of the DAF Daffodil.

Other transmissions have been suggested but never found acceptance.

The most promising mechanical alternative to the chain-and-pulley type of CVT is the toroidal drive, briefly offered in crude form in the 1930s and still under development, as a much more sophisticated unit, by the British engineering company Torotrak, which is part of the BTG group.

Torotrak prototypes have shown promising results in a range of vehicles and offer the same potential advantage as other CVT systems: the ability to select the exactly correct drive ratio for any combination of speed and load, enabling the engine to be run as economically as possible.

Transmissions do not have to be mechanical at all. The principles of electric and hydrostatic drive have been amply demonstrated in all manner of machinery.

In vehicles, however, they suffer from the drawback that the drive to the wheels almost has to be mechanical anyway.

Electric car enthusiasts time and again propose vehicles with the drive motors built directly into the wheels, only to have chassis engineers remind them that such major additions to unsprung (the groundwards side of the suspension springs) weight will ruin both ride comfort and vehicle stability.

Yet without this feature, electric and hydrostatic drives become little more than alternative ways of achieving continuously variable gearing. Hydrostatic drives also suffer considerable noise problems.

It seems likely, therefore, that car transmissions will remain mechanical in principle (heavy trucks may eventually be another matter).

The choice which faces the future project engineer is between a multi-ratio gearbox of some kind and a CVT. The choice is not clear-cut. The CVT offers theoretically perfect matching of engine speed to running condition.

But conventional multi-speed gearboxes come surprisingly close to the ideal curve, especially as the number of ratios is increased.

At the same time, engineers point out that CVTs have yet to match the very high overall efficiency (small power loss) of conventional systems.

Above all, perhaps, the industry's product planners have an annoying way of pointing out to enthusiasts for innovative transmissions that low cost and proven reliability remain high on the real world agenda.

History tells us that Andre Citroen wanted to give his original Traction Avant a novel form of automatic transmission. Eventually the car emerged, a year later and far enough over budget to break the company, with an ordinary clutch and manual gearbox.

The pragmatists add, equally infuriatingly, that the response of average drivers to the CVTs offered thus far has been lukewarm, to say the least.

It is certainly true that the number of ratios in conventional transmissions is increasing. The 1970s were an era of four-speed manual gearboxes and three-speed automatics. The 1980s saw the widespread adoption of five-speed manual gearboxes and four-speed automatics.

Now, despite some misgivings, we are seeing the appearance of six-speed manual gearboxes in some high performance production cars, and five-speed automatics are certainly with us.

This multiplication of speeds has its drawbacks, especially where manual gearboxes are concerned.

Some market surveys are said to have identified a resistance even to five-speed gearboxes among non-enthusiast drivers; and six speeds would certainly cause complaints unless some form of assistance can be provided.

The desire to do so combines well with the feeling in some quarters that driving – particularly in crowded town centres – could and should be made easier without recourse to a conventional automatic transmission.

It could be that the nearest thing to a breakthrough which we shall see in car transmissions will be a realisation of a 1930s dream: a system which duplicates the action of a skilled driver manipulating a manual gearbox.

Inevitably, electronics is the key to such an advance. The systems now being proposed usually feature not one but two clutches, each of them an electronic servo unit.

Electronic clutches are now well developed. Units developed by the French Valeo group have been run with success in a number of high performance competition cars and Valeo says it is close to a first production application.

If smooth clutch control can be combined with accurate shifting of an ordinary two-shaft gearbox, the need to use a much more expensive epicyclic gearbox, which is a feature of today's automatic transmissions, is avoided and the overall cost would be greatly reduced.

Aside from the question of clutches and gearboxes, we are in the midst of an engineering debate about two-wheel-drive versus four wheel drive transmissions.

The development at the centre of this debate is that of the traction control system (TCS) which in essence is able to sense a wheel beginning to spin through excess power, just as an anti-lock braking system can sense a wheel beginning to lock through excess braking effort.

The two systems, indeed, have much in common and when installed together share the same sensors.

The arrival of TCS has upset the assumption that very powerful cars would need four wheel drive to prevent frequent wheelspin, with its associated problems of stability and control.

Engineers who were looking (often askance) at the weight, complication, bulk and possibly also the extra noise and vibration of four-wheel-drive systems for large and powerful cars have begun to embrace TCs with something like relief.

It now seems likely that four-wheel-drive will in future be confined to those applications where ultimate traction is most needed: to the most powerful roadgoing sports cars and, of course, to off-road vehicles.

Jeff Daniels

Richard Feast considers the prospects for Europe in the coming decade

'Lean' rivals and pollution pressures

MR Bruce Blythe, Ford of Europe's vice-president in charge of corporate strategy, is clear about the European motor industry's main concern in the 1990s.

"It's balancing the increased demands for environmental clean-up in Europe, which is going to get much, much stronger faster than any of us think, combined with the new Japanese capacity coming into Europe at the same time," he maintains.

The Europeans are only too aware of what happened when North American makers faced similar pressures a decade or more ago. Meeting US safety, emissions and fuel consumption legislation cost Detroit billions of dollars, just as Japan started planning its transplant-building programme across North America.

US makers steadily lost market share to Japanese models, both imported and those assembled in America. Few expect the Americans, now in deep recession, to regain the ground lost during that time.

Now two of those challenges have crossed the Atlantic. Europe has to live with increasing concern on environmental matters as Japan builds up its transplant presence.

At the same time, there is the prospect of Japan exporting more built-up cars to Europe after the end of 1992. Just how many more is still being debated, but the quotas are likely to be considerably more liberal as the decade grows older.

This increased Japanese presence brings another kind of pressure in itself.

The country's carmakers work on the basis of four-year cycles for all their mainstream models – considerably shorter than carmakers in Europe or North America.

At the same time, Japan's well-established "lean" production allows it to build cars in lower volumes and still remain profitable.

Japanese makers are thus capable of producing numerous niche vehicles – and to renew them frequently. So far, the Europeans are still trying to catch up in this respect.

The combination is likely to prove very attractive to European car buyers, though BMW's chairman warns of a danger.

"The more often you change the model, the more you reduce the value of the product the customer has in his hands. With each model change, the old range will lose 20 per cent of its secondhand car price," says Mr Eberhard von Kuenheim.

The other factor working for the Japanese during this time will be the newness of its factories.

Greenfield site factories built in the 1990s, whether Japanese, American or European, are simply more efficient than old-established ones. They are designed around today's automated manufacturing methods and equipped with the best low pollution machinery.

However – at least in western Europe – most of the new factories are being constructed by Japanese companies.

The European industry's only comfort is the knowledge that democracy in eastern Europe should offer an escape valve. New car demand in eastern Europe is

The only comfort is that eastern Europe should offer an escape valve

expected to grow by up to 7 per cent a year well into the next century, compared with western European growth of 1.5 per cent.

This level of growth is matched nowhere in the world except south-east Asia – where Japanese car makers are investing as heavily as Europe's are in the old eastern bloc.

Ford's Mr Blythe says: "When the Japanese came to the US, and the emission laws came in early in the 1980s, American makers had nowhere to go. Our market has just expanded by about 40 per cent. What a godsend!"

But that is some way in the future. At present, most European car makers are coping with grim market conditions. Almost everywhere but in Germany, new car sales are on the floor.

But while the unification-inspired boom benefits mainly German makers, other European car companies are glad of their German exports since demand elsewhere is so flat. If communism in eastern Europe had not collapsed, the continent's car makers might well have been as badly hit as those in America.

It is against this background that European vehicle makers are facing demands for more environmentally friendly vehicles. They have to meet the industrial and marketing challenges, though they are aware of a possible consumer backlash against the car, because of the traffic congestion, noise and pollution that it causes.

Even so, and in spite of the present sales slump, there is an underlying public demand for new cars. As the century draws to a close, however, those new cars are going to evolve in a different way.

The serious technical emphasis will be on more user-friendly vehicles, not glamorous 200 mph supercars.

As drivers spend more time in their cars, makers will pay more attention to interior design and creature comforts. They will also spend huge sums to make cars quieter and less polluting. The cars will achieve better fuel consumption and there will be more alternative fuel vehicles.

On-board navigation systems to help drivers avoid the heaviest traffic will be commonplace. And cars will be designed specifically for ease of recycling when they reach the end of their lives.

But many car executives feel their industry has been singled out for special treatment. For example, Dr Kurt J. Lauk, Audi deputy chairman, says: "Traffic does contribute to pollution, but on a worldwide basis, traffic results only 10 per cent of the total CO_2. So somebody else has to find solutions to the other 90 per cent of the problem."

By and large, it is the German companies such as Audi which are in the vanguard of moves to clean up exhaust emissions and to design cars for recycling. VW, BMW and Mercedes-Benz either have or are planning recycling plants, while Europe's other carmakers are taking a less public stance.

Mr Klaus Toepfer, Germany's environment minister, has even proposed that carmakers should eventually be obliged to take back their old cars and completely recycle them.

The German industry's size and strength will almost certainly mean their lead will be followed by other members of the European Community.

NEW TECHNOLOGY

Electronic engine control

EUROPEAN manufacturers, mindful of the ever-rising challenge from the Orient, declare that it is only by technological advances that they can keep ahead of the Japanese.

When one considers how technically adventurous and enterprising the Japanese are, it may not be a case of keeping ahead as of keeping up. However, every one of the major players on the automotive scene internationally is bent on using what comes loosely under the pompous and over-used heading of technology.

By far the greater portion of new engineering features found on the latest production cars are either electronic or have the wonderful versatility of electronic control to thank for their viability. Electronics – mostly digital electronics – has been responsible for most of the greatest advances in contemporary cars in one way or another.

The best example of this comes under another pompous phrase – engine management. Electronic control of both ignition and fuel injection has tamed and civilised very nearly all high performance engines, so that one can potter quietly through town and village even in a Ferrari at low engine speeds without a hint of the spluttering and misfiring that would have betrayed that car's ancestors of 20 years back.

Jeremy Leng, of the Royal College of Art, with his car for the year 2010

The flexibility – the ability of an engine to work smoothly over the widest possible range of engine speeds, from peak power rpm down to nearly idling – of many modern electronically mastered power units is astonishing. It is all due to adaptive control of both fuelling and ignition, with electronic control which can refer to a very detailed memory of settings programmed into it.

In this context, it is good to see some manufacturers at last admitting the existence of high octane (98RON) unleaded petrol, and where adaptive knock sensing is available, programming the system to take full advantage of the more advanced (and therefore more fuel and power-efficient) ignition timing which this fuel permits, as well as adjusting the ignition to suit lower octane fuel when it is used.

The new Mercedes S-class uses electronic engine control fully. One most interesting instance is in harnessing the fuelling of the engine to provide a much faster catalytic converter warm-up from cold. Such converters do not begin to perform their job of lowering hydrocarbons, carbon monoxide and oxides of nitrogen until they have warmed up to around 400 deg C, which usually takes about 1½ minutes from a cold start.

To cut this delay, the control unit briefly richens the fuel/air mixture fed to the engine and at the same time causes air to be injected in the exhaust port, so that unburnt fuel in the exhaust ignites, raising the temperature in the catalyst to operating levels in half the usual time.

Variable valve timing first appeared on a production car with an Alfa Romeo engine, using purely hydraulic control. All the new S-class Mercedes petrol engines use electro-hydraulic control of the inlet camshaft to provide three settings of valve timing overlap, which avoids the compromise inevitable with a conventionally fixed valve timing, allowing more nearly optimum timing for a good steady idling, good mid-range power, and maximum power.

In the diesel field, Volkswagen has just announced a second "Umwelt" (environmental) diesel, this time for the Passat. As with the VW Golf Umwelt diesel, a lightly-blowing turbocharger provides excess air at all power levels, so that full power can be obtained without generating black smoke.

Exhaust gas recirculation plus a simple oxidation catalytic converter are fitted. As well as reducing carbon dioxide, hydrocarbons and oxides of nitrogen, the catalyst also removes hydrocarbons attached to soot particles, reduces particle emission and – remarkably – by also reducing polycyclic aromatic hydrocarbon compounds, reduces the worst components of diesel exhaust's notorious smell.

"Normal" exhaust gas emissions are kept below the strictest American limits, while the proposed German particle emission limit of 0.08 gram per kilometre is comfortably met.

In the transmission field, a little noted advance may well alter the way we change gear, and more importantly could develop into a more fuel-efficient automatic gearbox. Britain's Automotive Products some years back demonstrated an automatic clutch transmission system, with which one changed gear on a standard manual gearbox car simply by moving the gear lever.

There was no clutch pedal, its action being taken over under electro-hydraulic control, and although the throttle pedal remained, throttle action during gear changes was taken over electronically. It worked very well, and is due to appear on an unnamed light van soon.

Valeo, the French rival to AP, has a similar system as do Fichtel and Sachs in Germany, and Kongsberg Automotive, a Scandinavian company, except that Valeo, having successfully tested on a rally Lancia Delta Integrale, has beaten the rest to the first car fitment, as an option on the Ferrari Mondiale.

With further electronic control and via some added hydraulic or electric servos, a fully automatic version of a conventional spur gear manual gearbox is feasible, giving very high efficiency by eliminating the losses of a conventional automatic's torque converter.

Multiplex wiring has already been fitted first to the Cadillac Allante, but Bosch of Stuttgart now has a proprietary system of its own. A version of it is fitted to both the BMW 850i and the new S-class Mercedes. Basically, multiplex offers a mildly complicated, less expensive way of simplifying vehicle wiring. This becomes significant in luxury cars, where up to 2 km of cable may be used in one car's wiring loom.

Normal wiring involves wires between fuse, power source, the individual electric load (window motor, lamp, door lock, mirror, rear window heater and so on) relay and the driver's control switch. Multiply by the vast and increasing number of loads in today's better equipped cars, and you have an electrical nightmare.

Multiplex in principle uses a single power supply cable, analogous to the ring main of domestic wiring, feeding all loads, and usually another ring of much lighter control cable, with short radial cables off to a miniaturised solid state "receiver" and switch on each load.

In charge of the control ring is the master processor, which when a driver-selected command is received, sends a coded signal round the ring which will actuate only the appropriate receiver, switch and load. The same set-up can be used to keep the control unit informed of the status and condition of each load, warning of any failure.

One of the few purely mechanical advances, for some time proposed but now in production for Mercedes and BMW, is double glazing of side windows. In the new S-class, two 3mm thick panes are separated by a 3mm gap of sealed dry air, giving a claimed 36 per cent reduction in heat loss and largely eliminating side window misting. Noise transmission from outside is said to be reduced by 50 per cent.

Michael Scarlett

Jeff Daniels investigates tomorrow's materials

Ideal sensor sought

IF THERE is an area of vehicle technology which might be said not to have fulfilled the promise it held a few years ago, it is that of advanced materials. To a very large extent, today's cars are built of the same materials which have been employed for many years.

Major parts of engines are still made from that remarkable material, cast iron; transmission casings are more often cast from aluminium alloy to save weight. Suspension components are usually either fabricated from steel or cast in aluminium; so are the wheels themselves. In the area of seating we have even seen a retreat to traditional methods of construction (as in the Mercedes S-class), as people have come to regard polyurethane foam as a material which is difficult to recycle and which generates CFCs during its manufacture.

The reasons for this apparent conservatism are clear. Cost and reliability loom large in the mind of every corporate product planner, especially if he is defining a car to be built in its millions. Changing to a completely new material can mean that the already huge cost of retooling to produce a major component must be multiplied several times to cover the replacement of the machines themselves. A further disincentive to change has been added of late by the huge public interest in recycling, in which metals have the advantage over plastics and composite materials generally.

Even so, pressures remain which cause engineers to look at new materials for a wide range of applications. It is still highly desirable to save weight and to improve comfort and refinement; these are both areas in which new materials hold some promise. It is also true that some new materials can afford major savings in manufacturing cost. This, for instance, is the driving force behind the seemingly illogical interest in the plastic engine.

Plastics are still, probably, the new materials attracting most attention from the motor industry, although ceramics run them close. One aspect of plastics which is not widely appreciated is the sheer range of materials and characteristics lumped together within that catch-all classification.

It is certainly an obstruction to the wider understanding of plastics that they all look much the same, and, thanks to chemical industry nomenclature, even sound the same to the lay ear; it is only when alternative trade names, such as nylon or Perspex, catch on that the differences are better appreciated. Yet, recent years have seen many new materials being offered, many of them highly capable "engineering plastics".

The engineering plastics materials, such as polysulphone and PEEK (poly-ether-ether-ketane) are capable of replacing metals in demanding applications where loads and temperatures are relatively high. They cost more than steel or aluminium, but in the right application they save both weight and manufacturing cost, since they can be moulded accurately to shape rather than fabricated, and need virtually no finishing.

They tend also to be less demanding so far as lubrication is concerned. Such plastics

Lean burn catalysts are still being tested, but none will last 50,000 miles

are already replacing metals for components, such as roller-bearing cages.

The appearance of the engineering plastics has encouraged designers to take seriously the concept of the plastic engine. No engine can be all plastic; metal or ceramic material will always be needed (so far as one can tell at the moment) to contain the temperatures of the combustion chamber.

Increasingly, however, people are looking at the idea of the combustion chamber and some other high stressed areas, such as main bearings becoming inserts in a mainly plastic structure. The object is again to take advantage of the savings in weight and manufacturing cost which plastic has to offer. Ford of Europe has already demonstrated an engine which goes a long way in this direction; one of the lessons it taught was that plastics are nowhere near as good at noise attenuation as cast iron. The engineer's problems are, as always, diverse.

If plastics still attract attention, interest in ceramics has waned. After a first flush of interest, engineers have grown wary of the "adiabatic engine" concept which was tried out in Japan, using ceramic components to surround the combustion chamber and prevent any significant rejection of heat. Turbochargers which need ceramic turbines are no longer so popular, and ceramic inserts to provide thermal resistance in parts of some engines now work perfectly, so where is the need for further development?

Even so, work continues on ceramics, above all in Japan. As a family of materials, its most critical applications today are in exhaust system catalysts in which porous ceramic forms the substrate upon which the actual catalyst is deposited.

One of the holy grails of current materials research is a substrate which combines temperature resistance and mechanical strength to withstand the higher exhaust temperatures of a "lean burn" engine, which would permit big savings in fuel consumption. Most of the industry's major laboratories have lean burn catalysts on test, but nobody yet claims to have made one which will last anything like the 50,000 miles demanded by legislation.

Ceramics can also be used in composite materials. While most people think of composites as plastics reinforced by glass or fabric fibres, it is also possible to use ceramic fibres to reinforce metals. This can lead to notable weight savings.

Probably the best example to date is the metal ceramic composite connecting rods which have been test-run in Japanese engines with apparent success. Cost remains a barrier, but such components could become critically important if, as some engineers foresee, the main path of engine development is one of ever-higher specific output – squeezing adequate power out of smaller and lighter engines which will, in consequence, be very highly stressed internally.

Yet another area of development in its earlier phases is that of "intelligent" materials. It is now clear that electronic control systems used in the cars of today and tomorrow are critically dependent on the quality and integrity of the information they receive from their sensors. Consequently, there is huge interest in new types of sensor which involve no moving parts and which are highly resistant to vibration, temperature and corrosion.

The ideal sensor, in the eyes of the development engineer, is one that simply sits and relays information on the parameter in question in the form of an electrical signal. Materials already exist which change their electrical characteristics according to load, temperature and other factors; the hunt is on to widen the choice and their range of application. In the final analysis, this could be the most important area of new materials research for the motor industry.

ALTERNATIVE FUELS

Bush backs methanol

UNTIL QUITE recently, most industry experts looked for two things in their ideal fuel for the future. In the long term, it should extend by one means or another the finite reserves of our fossil fuels.

This implies the study of energy sources which may be alternatives to oil, such as electricity, gas, bio-fuels, methanol and hydrogen. In the short term, any such fuel should help as far as possible to minimise noxious exhaust emissions from internal combustion engines – carbon monoxide, unburned hydrocarbons and oxides of nitrogen.

To those concerns have now been added a third. While scientists seek to discover if the "greenhouse" effect resulting from atmospheric carbon dioxide build-up really exists, their deliberations have been overtaken by public and political opinion.

We would be foolish, the popular argument runs, to wait for proof positive. Far safer to do something about it now than to wait 10 years, before discovering that we should have acted then. Thus, concern over carbon dioxide emissions has already joined the concern over "conventional" emissions, and it is becoming relatively more important in the debate over future fuels.

The problem is that there are only two elements which are both abundant and which burn readily and controllably: hydrogen and carbon. Today's hydrocarbon fuels are a mixture of both, in a ratio of about 85 of carbon to 15 of hydrogen, by weight. For anyone concerned with the greenhouse effect, therefore, an ideal fuel of the future would contain less carbon and more hydrogen.

Such fuels do exist. They are the subject of intense current research and indeed of legislation in the US. By far the most promising of such fuels are the alcohols, ethanol (vegetable-derived ethyl alcohol) and methanol (mineral-derived methyl alcohol, most celebrated in the lay mind as the alcohol which causes blindness).

The appeal of the alcohols is that, while conventional hydrocarbon fuels contain almost six times as much carbon as hydrogen, ethanol contains only four times as much, and methanol a little over three times as much.

This has been enough to encourage the Americans to greet alcohol fuel, and especially methanol, as a great step forward and write legislation encouraging its use into the statute book. President Bush has lent the methanol programme his public support.

The world's major car manufacturers have prepared test fleets of "flexible fuel vehicles" able to run on any mixture of petrol or methanol. Yet at the same time, senior engineers in European and Japanese companies have begun increasingly to voice doubts about the wisdom of the methanol programme.

Jeff Daniels

Richard Feast looks at the role of the design consultancies

The backroom boys keep quiet

THE INDEPENDENT design and engineering consultancies play a far larger role in the motor industry than is generally realised. Indeed, without them, the car-producing industries of Europe and the United States would quickly run out of new models.

A quick glance along any high street will give some indication of the important contribution the consultants play in producing the cars we drive today. Examples of their handiwork are everywhere:

- The Fiat Tipo – designed by IDEA of Turin.
- The Volkswagen Golf convertible – engineered and manufactured by Karmann of Osnabruck.
- The Seat Ibiza – with its engine designed by Porsche of Stuttgart.
- The Volvo 440 – a car engineered, tested and manufactured in association with International Automotive Design (IAD) of Worthing.

And these are only examples for which there is an acknowledged input by the consultancies, which are notoriously secretive about their client lists.

With the possible exception of Japanese models, almost every vehicle on the road today contains some element of the consultants' skills.

It is a business that is likely to grow, even if, like all other aspects of society, consultancy work is suffering the effects of the economic slump.

"The responsibilities are becoming larger and larger," reports Mr John Shute, chairman and founder of IAD.

More and more assemblers are postponing all but their most vital projects. At the moment, consultants are living a more hand-to-mouth existence on smaller three- or four-month projects. They are anxiously awaiting the economic upturn which will give assemblers the courage to sign off on the big projects.

They know the multi-million pound turnkey projects will have to come if the car makers are to remain competitive in the middle and late 1990s. There is certainly no let-up in competitive pressure from the Japanese, who tend to retain much more of the design and development functions in-house.

The consultants also take heart from two trends: towards more niche vehicles and shorter product cycles. Once again, much of the impetus behind these stems from Japan.

Their car makers are geared to four-year model replacements, compared with the six years at least which have been normal in Europe and North America.

In addition, lower volume *niche products such as* convertibles, coupes, sports cars, people-carriers and sports-utilities, are becoming increasingly popular, as customers demand vehicles that are different from the mainstream.

All these extra models have to be designed, tested and prepared for production. And with the assemblers becoming increasingly lean in their operations, much of the work will be contracted out to private consultancies.

Apart from the simple expedient of getting the job done, the other main reason for turning to consultants is not difficult to understand. The consultants reckon they can do a given job for a lot less money.

"It varies, but we believe we can do it for nearly half the price," says Mr Ian Everard, sales and marketing director of Canewdon, one of Britain's medium-size engineering companies.

The trend is for assemblers to reduce product development overheads – manpower – in *order to concentrate on the* core business of manufacturing.

Neither is it unknown for an engineer made redundant by a carmaker to join a consultancy only to find himself working on the same project which has been sub-contracted to his new employer.

The heads of Britain's biggest two consultancies started their careers with big assemblers.

Mr Shute began IAD after Vauxhall wound down its engineering centre in England. Today, IAD has a turnover in excess of £60m, and employs 1,450 people worldwide.

An engineer made redundant by a carmaker may join a consultancy only to find himself working on the same project which has been sub-contracted to his new employer

Mr John Whitecross, chairman and chief executive of Hawtal Whiting, began with Briggs Motor Bodies and Ford. Today, his company has a turnover of almost £60m and employs 1,140 people in Britain and North America.

The consultants' specialities vary, but they span the whole gamut of carmaking, from design to legal compliance by *way of model making*, panel beating, testing and tool design.

The global reputations of such British companies as IAD, Hawtal Whiting, MGA, Canewdon, Motor Panels, Tickford and Ricardo grew as the country's vehicle manufacturing base declined.

More than half Hawtal Whiting's work is for North American clients – a factor which makes it subject to the vagaries of exchange rates. "We've learned to live with the high dollar, and we've cut our cloth to suit," says Mr Whitecross.

Italian companies such as Ital Design, Pininfarina, Bertone and IDEA are best known for their styling abilities. But in these days of crash tests, lightweight construction, aerodynamics and manufacturing automation, styling means more than creating pretty shapes. Today, the people involved are designers, not stylists.

Pininfarina and Bertone also build niche vehicles on behalf of clients. Cabriolet versions of the Peugeot 205 and Vauxhall Astra are examples.

In this respect, they compete with Karmann, a company which specialises in the manufacture of low volume models that the big companies find *uneconomical to make*. Karmann's big client is VW, for which it builds Golf convertibles and Corrado coupes.

Porsche in Germany has long undertaken contract engineering for bigger companies. It can be lucrative work which frequently earns as much money for the company as selling its own cars.

Porsche's clients range from Mercedes-Benz, for which it assembles certain sporty saloons, to Lada, for which it helped engineer the Samara hatchback.

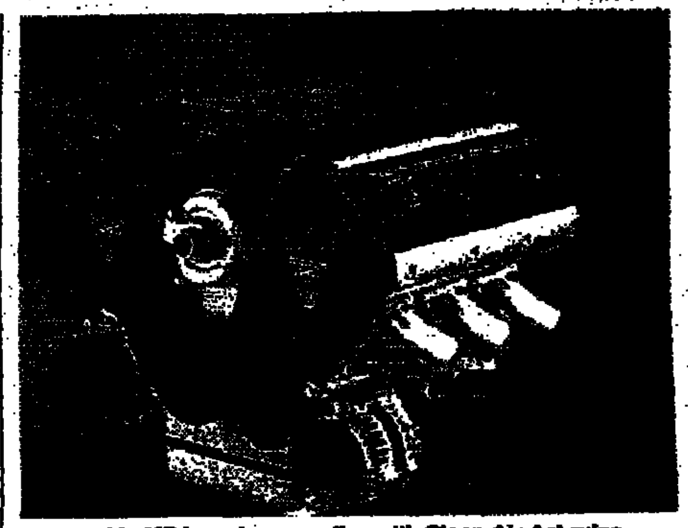
It was also the inspiration for Britain's Group Lotus to start offering its engineering know-how to the volume car makers. Now that Lotus is owned by General Motors, many of its clients are GM divisions, though it has worked for Volvo and Chrysler among others.

More recently, motorcycle maker Yamaha was commissioned by Ford of Europe to design and develop a small four-cylinder engine. Yamaha is known to have previously worked for Ford in North America and Toyota in Japan.

But the public will never know to what extent the consultants have been busy because of the extreme secrecy throughout the whole business.

A large consultant may be working for more than one assembler at a time, and it is vital to maintain the rivals' secrets.

There is also the fact that most assemblers like to claim their new vehicles as entirely *their own. And as the client is* picking up the bills, the consultant has to remain silent.



Cosworth's MBA engine complies with Clean Air Act rules

Michael Scarlett on accidents

UK leads in road safety

ITS ENEMIES are fond of saying how dangerous the car is. Yet, if one takes into account the number of vehicles on the roads and the distance they cover in a year, it is remarkable that there are not many more serious accidents than statistics record.

German research, which measured the millions of vehicle kilometres travelled for every single traffic fatality between 1970 and 1987 showed safety rising in most of the developed world, with the UK the safest of all by 1987 at 175m vehicle km per traffic death, narrowly ahead of west Germany (160m), the US (150m), and with France (93m), Austria and Italy (50m) trailing.

Traffic legislators, bent on telling Germany that it must step into line and abandon its lone adherence to no overall maximum speed limit on motorways, rather than the UK's 70 mph limit and the even lower speed restrictions in the US, may have to think again.

Since there are more than *100m miles between fatalities* in Britain – even 31m vehicle miles in Austria and Italy – few of us ever see a fatal accident on the motorway. Nevertheless, it is fashionable to see the motor industry as laggards in making cars safer.

There are two *sorts* of car safety. Passive safety is the more recent discipline, where the designer does his best to protect car occupants from injury in a collision. Active safety is the ability a well-designed car gives the driver to avoid a collision – through good brakes, good tyres, good performance, good roadholding and nimble, safe handling.

For most manufacturers – with some distinguished exceptions such as Mercedes-Benz in Germany, Volvo in Sweden and, to some extent, the old Rover company in *Britain* – in the drive towards higher passive safety it has been a case of legislators, especially in the US, leading the industry.

However, legislation has traditionally set only low minimum standards for active safety. Such cars as the Triumph Herald, the Volkswagen Beetle and most early BMWs and Porsches might never have *been permitted off the production line if standards then had* been as high as today's.

Many companies now exceed legislative requirements on safety. Usually, in the 30mph barrier impact test, the amount by which the steering column can be forced rearwards – not more than four inches under US safety rules – has been comfortably undercut.

And the industry's safety research has shown how existing safety tests may be inadequate and how to improve them. One example arose in the classic barrier crash test, in which a car is propelled at 30mph into a virtually solid 200-ton wall. This test has been at the core of most passive safety legislation since at least the US Motor Vehicles Safety Act of 1966.

Research into real-life collisions showed that the majority of serious cases occurred not when cars crashed squarely into one another or into solid objects, but where the contact was at an angle or only over part of the car's front.

A car developed to crash into a wall at right angles with maximum absorption of the deceleration forces, and minimum injury to occupants, might well not perform nearly so safely when hitting the same wall at 30 degrees off the right angle.

Worldwide, national safety standards vary quite widely, with the US still generally the most demanding (though when it comes to seatbelt wearing, the US is still behind Europe).

Impact absorption by the front of the car, together with the surviving, non-deforming passenger cell, is now well enough understood for computer-aided design and the results of impact simulation on a computer screen to make a lot of testing unnecessary.

The first new engine whose design – and unusual cylinder arrangement – were partly influenced by crash absorption considerations was launched last November.

Side collision is far harder to deal with

The Volkswagen-Audi *group's 2.8-litre vee-six-cylin*der is conventionally arranged with two banks of three cylinders set at 90 degrees, for the longways engined new Audi 100. Vee-six engines are wide, but short lengthwise, leaving plenty of nose structure for impact absorption when they are installed lengthwise.

Three months later, VW revealed the long-rumoured similar capacity vee-six engine for the Passat, and later, for a top-end version of the new Golf due this autumn. A major reason for the 15-degree vee disposition of its cylinders is that overall engine width is much less than on a 90-degree vee, allowing a maximum of crash-absorption length in the nose of the cross-wise engined layout used in all Volkswagens.

In spite of mistrust by the public, the air bag which inflates from a pocket in the steering wheel hub – and nowadays out of the fascia in front of the front passenger on sensing the start of collision deceleration – is becoming more widely accepted as well as legally required.

There are now calls for similar impact absorption to cater for side impact, a frequent *form of collision. Side-swipe* protection has previously been confined to reducing intrusion into the passenger box with reinforcements in doors.

Side collision is far harder to deal with, because in contrast to front collision, there is in an average family car only one-sixth as much length between the outside and the nearest occupant and a far smaller thickness of structure in which to absorb impact. For this reason, some researchers are working on applying the air bag to the side of the cabin as well as the front.

Besides improving car occupant protection, a lot could be done to reduce the chances of collisions by better management of traffic – which becomes daily more important as its volume increases. Some 14 European motor manufacturers and related companies – including Britain's Jaguar, Lucas and Pilkington – have collaborated since 1987 on a remarkable if under-publicised research programme to establish safer traffic systems.

All of which will help in the future – but sadly not nearly as much as higher standards of driving.

FINANCIAL TIMES
COMPANIES & MARKETS

Tuesday May 21 1991

INSIDE

Sedgwick steady in first three months

Sedgwick, the international insurance group which last year carried out a major cost-cutting programme, yesterday announced static pre-tax profits for the first quarter. Pre-tax profits in the three months to end-March came out at £42.6m ($72.8m) against £42.5m last time. Sedgwick had reported sharply reduced full year profits of £69.3m that included £21m of exceptional charges for redundancies and closures, especially in the US. Page 26

Chilean gold mine leaves them all breathless

A prospective visitor to the Choquelimpie gold mine in the Chilean Andes will first have to undergo a strict medical, testing blood pressure and pulse rates. Choquelimpie is the world's highest commercial mine, at 4,825 meters, and shifts 4.5m tonnes of gold-bearing rock a year. But one in every three visitors suffers altitude sickness which causes headaches, nausea and, sometimes, vomiting. Kenneth Gooding reports on how the operators cope with working at these difficult altitudes. Page 30

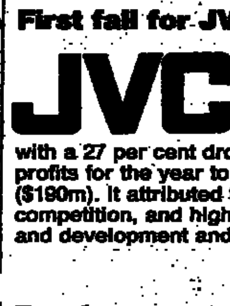
Polly Peck's silver lining

Vestel has risen above the dark cloud hanging over Polly Peck International. PPI's Turkish consumer electronics subsidiary boosted profits by almost four times in 1990. Vestel's success provides an object lesson for its rivals – how a foreign investor new to the field can shake up a well-established industry. John Murray Brown reports on one of PPI's more resilient subsidiaries. Page 28

First fall for JVC in four years

JVC, the Japanese consumer electronics company, yesterday reported its first pre-tax profit fall in four years with a 27 per cent drop in consolidated pre-tax profits for the year to March 1991 to Y26.3bn ($190m). It attributed the fall to increased price competition, and higher spending in research and development and advertising. Page 20

Bond swap moves a step nearer



Alan Bond, former chairman of the Bond Corporation, will hold 6 per cent less of the company's shares if a proposed debt-for-equity swap approved yesterday by shareholders in Perth is carried out. Peter Lucas (left), who replaced Mr Bond as chairman last year, said Mr Bond voted in favour of the reconstruction. The vote follows approval from Swiss franc bond holders in Geneva on Thursday, and clears the way for a vote by other European bond holders within the next fortnight. Kevin Brown reports. Page 20

Barlow Rand falls 14%

Barlow Rand, South Africa's largest industrial group, yesterday announced a 14 per cent profits decline in the six months to March as Middelburg Steel, a big subsidiary, suffered a loss. Turnover rose 12 per cent to R15.5bn ($5.5bn), but pressure on margins saw operating profit 1 per cent lower at R1.2bn. Page 22

Market Statistics

Companies in this issue

Chief price changes yesterday

NEW YORK ($)				TOKYO (Yen)			
Rises				**Rises**			
Ameritrust	19⅞	+	2¾	Sanoh Ind	984	+	84
Compaq	35⅝	+	⅝	**Falls**			
Dow Chemical	53	+	1⅜	Tokai Kanko	601	−	97
Intel	46¾	+	1¼	Tobishima	1070	−	120
K-Mart	41½	+	1¾	Kyowa Sangyo	1250	−	120
Falls				Matsushita Ref	1070	−	90
Lasermaster	5	−	1	Kawasaki Lab	1200	−	100

New York prices at 12.30pm. Paris and Frankfurt closed.

LONDON (Pence)							
Rises				Assoc Nursing	93	−	18
Brent Walker	32	+	3	Brit Airways	159½	−	7½
Brit Telecom	358	+	6	Business Tech	46	−	4
Dewhirst	26½	+	2½	Courtaulds	384	−	11
Dawson Tyson	33	+	5	Drummond	25½	−	4
Ex-Lands	41	+	3	First Tech	35	−	10
Harnocell	139	+	15	Harvey Thompson	253	−	45
Trimoco	21	+	1½	Jackson Group	58	−	7
Utd Friendly B	385	+	12	Renaissance	49	−	13
Falls							
ASW	243	−	12				

Montedison rises 13% in first quarter

By Haig Simonian in Milan

MONTEDISON, the Italian chemicals, energy and agro-industrial concern controlled by the Ferruzzi group, said yesterday that it had recorded a 13 per cent rise in operating profits for the first quarter of 1991.

The group also revealed consolidated after-tax profits, net of minority interests, of L556bn ($437m) for 1990. Sales were little changed at L14,739bn against L14,773bn in 1989.

Comparison with 1989 earnings is virtually impossible, due to the merger announced last July between Montedison and Ferruzzi Agricola Finanziaria, Ferruzzi's agro-industrial subsidiary. Matters are further complicated by the sale last November of Montedison's 40 per cent stake in the Enimont chemicals joint venture to Eni, the state-owned group.

However, the sale brought Montedison a welcome liquidity, reducing group debt from L6,755bn at end-December 1989 to L5,815bn at the end of last year. The disinvestment has also rid the group of a troublesome bulk chemicals business just as it was slipping into loss, and more than compensated for the expense incurred in buying out the minority interests in Montedison's Himont subsidiary in the US.

In 1989, Montedison's group net profits were already confusing. Although group net earnings amounted to L1,156bn, if extraordinary gains stemming from Enimont-related revaluations were deleted, then profits actually fell by 26 per cent on the 1988 figure to L362bn.

Gross operating profits dropped from L1,820bn in 1989 to L1,631bn last year. The figures include L618bn in net operating profits and L1,013bn in depreciation, against L930bn and L820bn respectively in 1989.

The company, which is maintaining its dividend at L50 for each ordinary share and L70 for savings shares, attributed the sharp earnings fall to the downturn in the chemicals industry.

The polymers business was particularly difficult. Lower raw material costs did not compensate for the fall in finished product prices. Earnings were also affected by exchange rate factors and dry weather in Europe, which boosted raw material prices on the agro-industrial side.

ENICHEM, the Italian chemicals group previously known as Enimont, plunged into the red last year with a loss of L88bn ($68.45m), after a profit of L716bn in 1989, writes Haig Simonian in Milan.

Before minority interests, the loss amounted to L68bn, against net earnings of L740bn in 1989.

The group, controlled since last November by Italy's state-owned Eni chemicals and energy concern, blamed its loss on the depression in the world chemicals industry.

The company is restructuring involving job losses, disposals and joint ventures.

EniChem said earnings had been hit partly by lower demand and decreased margins for many of its products. Exchange rates and a sharp rise in costs in the second half also affected earnings. Group sales fell by 1.9 per cent from L15,347bn in 1989 to L15,060bn, with the sharpest falls being in agro-industrial products and elastomers.

Net group operating profits fell to L743bn from L1,665bn in 1989, while net debt rose to L8,341bn against L6,186bn in 1989.

However, EniChem managed a small profit of L800m at the parent company level. As a result, the company will be able to pay a dividend of L15 a share against L85.20 in 1989.

Tottenham shares Gascoigne's pain

The injury to Britain's best-known footballer has jeopardised his club's financial hopes. Jane Fuller reports

When Paul "Gazza" Gascoigne crumpled to the ground during Saturday's FA Cup Final, his right knee visibly swelling, Tottenham Hotspur's financial hopes crumpled with him.

The London football club, one of the UK's big five, had counted on selling Gascoigne to the Italian club Lazio for £7m-plus, to halve its debts of £13m-£14m. Now that torn ligaments have side-lined him for several months, the deal is in jeopardy and the club must think again.

For its part, Midland Bank, owed £10m-£11m, must decide how much longer to be patient. Since last year, the club has been in breach of its loan agreement and Midland can call the debt in at any time.

Tottenham's predicament is a lesson to the other big UK clubs in how mis-managed diversification and lax control of stadium development can bring even a cup-winning club to the brink of bankruptcy.

The lesson is particularly relevant as UK soccer is faced with spending hundreds of millions of pounds to create all-seater stadia as a result of the Taylor report into the Hillsborough disaster.

Midland Bank's decision is not an easy one. Tottenham is paying its total interest bill of £35,000-a-week and has reduced bank debt from £12.3m last May. After closing loss-making clothing subsidiaries and cutting costs, the club's 1990-91 operating profit should be better than the £2m earnt last year. The victorious FA Cup campaign will have contributed about £500,000.

Tottenham is alone among the big five in having much in the way of borrowings. Arsenal and Manchester United are both launching big fund-raising issues – bonds to secure seats and a stock market flotation respectively – from a debt-free base. Neither Liverpool nor Everton paid any interest in 1989-90.

But while its rivals are raising money for future development of their stadia, Tottenham needs the cash to remedy past mistakes. These include cost over-runs on the East Stand at White Hart Lane, which eventually absorbed £8.7m, and unsuccessful forays into fashion and sportswear, which lost several hundred thousand pounds last year.

Selling Gascoigne had become more urgent as hopes faded for alternative sources of capital – either a substantial rights issue or the takeover of the club by a consortium backing Mr Terry Venables, the team manager. Mr Venables' future with the club is now in doubt because of his challenge to the board and the expiry of his contract this summer.

Without a fresh capital injection, Tottenham cannot hope to regain its stock market listing, suspended in October with the shares at 91p.

Tottenham can, of course, sell players other than Gascoigne. Gary Lineker, the 30-year-old England striker, might fetch the best part of £2m. Paul Stewart, scorer of a crucial goal on Saturday, might be worth more than the £1.5m Tottenham paid for him in 1988. In all, a dozen of the club's 34 professionals have been assigned a book value of £9m including £2m for Gascoigne.

But the sums are small compared with the amount Gascoigne would have raised. Similarly, any rights issue or other capital-raising exercise that Tottenham might conduct now looks smaller than was hoped for in the past.

Last year, Mr Irving Scholar, club chairman and holder of 26 per cent of the shares, tried to negotiate a secret £13m deal with Mr Robert Maxwell. But it dissolved amid stock exchange disapproval and boardroom acrimony. Mr Scholar left the board, and Mr Paul Bobroff, who came in with him in 1982, resigned from the chairmanship.

The new chairman is Mr Nat Solomon, former head of Pleasurama. Since his arrival, the finance company Baltic is understood to have offered to arrange a one-for-one issue at 40p-a-share – but that would have raised less than £4m after expenses.

Mr Venables's efforts to buy into the club have also proved unacceptable. His first tilt, said to be worth £20m-plus, was via a consortium including the shadowy property dealer Mr Larry Gillick and advised by the struggling finance house Tranwood Earl. It did not convince the board.

His second effort was far more modest: to spend at most £3.25m on new shares in the club at 60p each to gain a maximum stake of 35 per cent. Although this went down well with the shareholder-fans, who have lost patience with Messrs Scholar and Bobroff, it failed to win enough support among directors and major shareholders, some of whom Mr Venables wanted to force out.

Mr Tony Berry, who joined the board before his Blue Arrow group ran into trouble, is a Venables supporter. But another director says the move is an attempt to control the club on the cheap.

These divisions and the feeling that Mr Solomon, brought out of retirement for the job, is not a long-term chairman, have made the task of attracting new investors all the more difficult.

Other top football clubs hope to avoid similar problems. Manchester United has stressed that it will not diversify away from football. It expects to make a pre-tax profit of about £5m this year on a turnover of about £15m, thanks to success in the European Cup Winners' Cup.

Arsenal has chosen to cash in on its fans' emotional ties, rather than on an appeal to harder-headed investors who would want interest or dividend payments. It is offering seats, reasonable season ticket prices and better facilities to raise £16.5m from 12,120 supporters.

Tottenham says it needs to spend less than its rivals to comply with the Taylor report because of previous investment in new stands. It estimates that £2.5m of new investment plus a £2m grant from the Football Trust will make White Hart Lane all-seater by the deadline of August 1994.

On the revenue side it can look forward to about £2m from European football next season, plus price rises of more than 20 per cent. Attendances might fall, however if it sells stars to pay debts.

Tottenham's problems illustrate how British football must balance its twin needs for investment: in new stadia, and in players. The risks and rewards are great. Without new stadia, the clubs cannot meet government requirements. Without strong teams, the clubs cannot take proper advantage of their return to European competition, and of the possible emergence of super-leagues at home and in Europe.

See Lex Page 18

LTV plan to sell defence unit criticised by creditors

By Martin Dickson in New York

LTV, the US steel company, yesterday announced plans to sell its large defence and aerospace business to help it out of bankruptcy proceedings – but it ran into immediate opposition from creditors of the division.

LTV's defence and aerospace company makes missiles, rockets, space systems, military vehicles and sub-assemblies for military and commercial aircraft. It is the 20th largest defence contracter in the US.

The division employs 16,100 people, had sales in 1990 of about $2bn and its current order backlog is more than $5bn. However, the business has been barely profitable in recent years, with the aircraft products side making a $19.3m operating loss last year and missiles and electronics a profit of $2m.

LTV has been in Chapter 11 bankruptcy proceedings since 1986 but earlier this month announced a plan to emerge from the protection of the courts, involving payment of large amounts of available money to settle a long-running dispute over the funding of its three pension plans. That package was immediately attacked by the group's unsecured creditors, who would be paid a maximum of only 25 per cent of their claims.

It is selling the defence division to meet a requirement that it pay about $450m in cash immediately into the pension plans.

LTV said when it unveiled the restructuring plan that this commitment would require it to raise $300m through asset sales – although it expects to realise substantially more than that from the sale of the defence division.

However, the disposal plan stirred up opposition among creditors holding about $170m of the aerospace unit's $300m debt. This group is concerned that the restructuring plan has made little distinction between creditors of the steel side, where most of the pension obligations lie, and its healthier aerospace side.

The creditors said the LTV plan was a "cynical and ill-conceived attempt to confiscate value which rightly belonged to them," and there was no business justification for selling the operations now.

Analysts said the company could have difficulty selling the division at a good price: although US commercial aircraft sales are relatively buoyant, American defence spending is declining.

Brent Walker to unveil bank plan

By Maggie Urry

MR GEORGE Walker, chief executive of Brent Walker, was confident yesterday that the heavily indebted leisure group's bankers would accept a business plan to ensure its survival. The shares rose 3p to 32p.

The former boxer said his confidence was based on relatively good trading and the fact that it was "in no one's interests" to put the group into administration. Banks, which have lent over £1.2bn ($2.4bn) to Brent Walker, would suffer large losses if the company went bankrupt.

Since last November, when an emergency refinancing was agreed with its banks, Brent Walker has only been able to continue trading with their support. Now its creditors have to decide whether to put the group's finances on a firmer footing for the longer term, and how to accomplish that.

Looking cheerful and flanked by the senior directors appointed since the group's refinancing, Mr Walker said he could not reveal any details of the plan ahead of presenting it to the banks this afternoon. All he would disclose was that the plan envisaged no reduction in his role at the company. He, with his family, is the company's largest shareholder.

The plan is thought to include proposals to sell assets such as the group's casinos and some of its sports and leisure complexes. Brent Walker wants to keep the William Hill betting shop chain, its brewing and pub business, and leisure developments such as Puerto Sherry in Spain and Brighton Marina on the south coast of England. A proposal to convert some of the group's bank debt into shares is unlikely.

Mr Walker was supported in his optimism by Lord Kindersley, chairman, and Mr Nicholas Ward, group managing director. Mr Ward said that the plan being put to the banks was "realistic, achieveable and a sensible way forward for this group".

Their bullishness was despite the announcement of a retained 1990 loss of £255.9m (against a profit of £104.7m), a £499.2m write-down of property values and a £690m fall in shareholders' funds to £139m. Brent Walker did not pay a final dividend for 1990. It warned it would make an overall loss this year and would pass the dividend on its preference shares.

Operating profits rose by 8.2 per cent to £122.2m. Net interest charges of £116.2m (£44.1m), exceptional debits of £38.1m and extraordinary debits of £201.8m did most of the damage to the profit and loss account.

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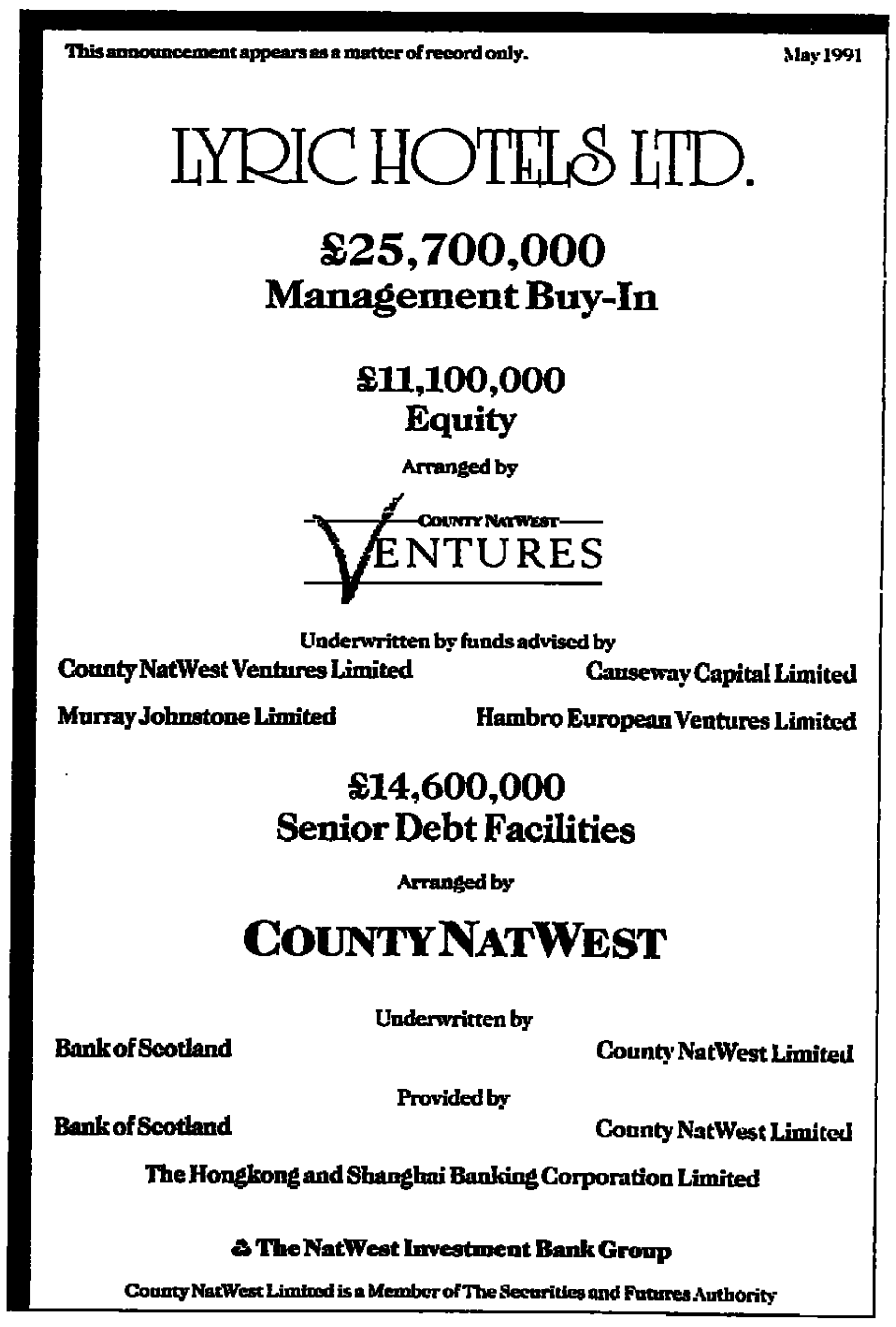


NYSE COMPOSITE PRICES

Continued from previous page

1991 High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
20¼	18	RockellCtP	1.80	0.10	19	280	19¾	19⅞	19⅝	-⅛
200	187¼	Rockwl1.35				z100	187¼	d187¼	180	-20
29¼	22¾	Rockwl x	0.86	0.03	10	922	27⅝	27¼	27⅜	-¼
5½	3⅝	Rodm&Rens			125	7	3¾	3¾	3¾	-¼
46⅝	32¾	Rohm&Haas x	1.24	0.03	12	231	37½	37½	37½	
29¾	14⅞	Rohr Inds			19	1013	25	24⅝	24⅝	-⅜
12⅞	8½	RollinsEnv x	0.09	0.01	22	746	10⅞	10⅜	10⅜	-½
25	18⅝	Rollinsinc	0.56	0.02	19	5	23	22⅞	22⅞	-⅛
11⅞	7¼	RollinsTrL x	0.20	0.02	10	21	10⅜	10¼	10⅜	
11⅞	6¼	Rowan Cos			15	41091	9⅝	9¼	9¼	-⅛
24⅞	22¼	RoyBkScot	1.20	0.05		20	24¾	24½	24½	-⅛
84¾	73¼	RylDutch x	2.36	0.03	10	5914	81¼	80⅝	81	+⅝
11	7½	Royce Val				41	10	9⅞	10	+⅛
54	37	Rubbermaid x	0.80	0.01	28	282	49⅝	49⅛	49⅝	+⅛
17½	13⅞	RussBerrie x	0.60	0.04	11	413	14⅛	14	14	-⅛
7⅛	4	Russ Togs			1	3	4⅝	4⅝	4½	
28⅞	19¼	Russell Cp	0.32	0.01	16	410	22½	22	22¼	-¼
19⅞	14	Ryder Syst	0.60	0.03	21	664	18⅝	18⅛	18¼	
25¼	13¼	Ryland Grp	0.60	0.03	31	28	21⅛	20¼	20¼	-⅜

- S -

1991 High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
28½	20⅜	S Anita Rl	2.08	0.08	18	14	25¼	25½	25⅝	
15¼	11½	SCOR US Cp	0.24	0.02	8	10	13⅞	13⅞	13⅞	
37	20¼	SPS Techno	1.28	0.04	17	6	32¼	32¼	32¼	-½
2⅛	⅞	Saatchi&S				17646	1⅛	1	1⅛	
12⅝	11	Sabine Rlt	1.51	0.12	7	13	u12⅝	12½	12⅝	
9⅞	5⅞	Safecard	0.15	0.02	8	88	8⅞	8¼	8⅜	
12⅛	8⅝	Safeg'd Sc			3	7	12	12	11⅞	
37	25	SafetyKln	0.32	0.01	30	289	31½	31½	31¼	-⅛

- T -

1991 High	Low	Stock	Div.	Yld.	P/E	Sls 100s
14½	11½	Swiss Helv				159
23⅛	10⅞	Symbol Tec			39	713
10½	7¼	Syms Corp			13	35
18⅞	13⅛	Synovus Fn	0.38	0.02	14	31
49⅝	30¾	Syntex Crp x	0.92	0.02	95	4329
40¾	30	Sysco Corp	0.28	0.01	24	1272
9⅞	4⅝	Systems Cn			2	16
9¼	4½	TCBY Enter	0.40	0.05	10	336
16⅞	7	TCF Financl x	0.40	0.03	4	266
8⅛	6⅞	TCW Conv S	0.84	0.11		197
43⅛	29⅞	TDK Corp A	0.60	0.02	29	41
8¾	6⅝	T I S Mtge	1.28	0.15	8	120
19⅞	9⅝	TJX Cos	0.48	0.03	15	523
21	18½	TNP Enterp x	1.63	0.08	12	117
43	34½	TRW Inc x	1.80	0.04	13	187
1½	⅞	TacomaBoat			7	31
24½	18⅛	Taiwan Fd				12
8¼	4¾	Talleyind	0.20	0.04	0	124
11⅛	7	Talley Pf				42
59½	36⅝	Tambrands	1.20	0.02	22	153
17⅛	9¼	Tandem			17	1210
38½	26	Tandy Corp	0.60	0.02	9	865
12	10⅞	Taurus Mun x	0.82	0.07		21
35¾	31½	Teco Energ	1.72	0.05	14	185
28⅞	16⅞	Tektronix	0.60	0.03	18	591
1⅝	⅝	Telecom Co			8	6
24⅞	14⅞	Teledyne	0.80	0.04	20	283
30⅛	25⅝	TeleEspSA	1.52	0.05	4	464
42¼	28½	Templeinl	0.88	0.02	10	696
16⅞	11½	TempltEmMk	0.10	0.01		78

- X - Y - Z -

1991 High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
60⅛	35¼	Xerox	3.00	0.05	9	1042	54⅛	53⅜	53⅜	-1
50½	43¼	Xerox4.125				z100	50	50	50½	
21⅞	14⅛	Xtra 1.94 x				4	19⅜	19⅞	19⅜	+⅛
24⅞	14¼	Xtra Corp x	0.72	0.04	11	3	20⅛	20⅛	20⅜	
1½	⅞	Zapata			0	61	1⅛	1⅛	1⅛	
9⅞	6⅛	ZenithElec			2	280	6¾	6⅝	6¾	+⅛
18¼	12	Zenith Nat	1.00	0.06	89	20	17	16¾	16¾	-⅛
6	4½	Zenix Inc x	0.87	0.15		13	5⅞	5¾	5¾	
15⅛	10⅞	Zero Corp x	0.72	0.05	16	97	u15⅛	14⅞	15⅛	+⅛
41⅛	29½	Zurn Ind	0.88	0.02	14	285	36¾	35½	36½	-⅛
13½	10¼	Zweig Fund				151	12¼	12⅛	12¼	
9⅞	8½	Zweig Tdl x	1.09	0.11		377	u9⅞	9¾	9¾	

Price data supplied by Telekurs.

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 percent or more has been paid, the year's high-only range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividend are annual disbursements based on the latest declaration.

a-dividend also xtra(s). b-annual rate of dividend plus stock dividend. c-liquidating dividend. cld-called. d-new yearly low. e-dividend declared or paid in preceding 12 months. g-dividend in Canadian funds, subject to 15% non-residence tax. i-dividend declared after split-up or stock dividend. j-dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting. k-dividend declared or paid this year, an accumulative issue with dividends in arrears. n-new issue in the past 52 weeks. The high-low range begins with the start of trading. nd-next day delivery. P/E price-earnings ratio. r-dividend declared or paid in preceding 12 months, plus stock dividend. s-stock split. Dividends begin with date of split. sls-sales. t-dividend paid in stock in preceding 12 months, estimated cash value on ex-dividend or ex-distribution date. u-new yearly high. v-trading halted. vi-in bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by such companies. wd-distributed. wi-when issued. ww-with warrants. x-ex-dividend or ex-rights. xdis-ex-distribution. xw-without warrants. y-ex-dividend and sales in full. yld-yield. z-sales in full.

AMEX COMPOSITE PRICES

3:00 pm prices May 20

Stock	Div.	P/E	Sls 100s	High	Low	Close	Chng
OMI Corp	0.10	11	5	6⅝	6⅝	6½	
Pall Corp	0.44	35	3817	32¼	31½	32¼	+⅝
Pegasus G		7	76	11⅛	11	11⅛	
Perini		10	23	14½	14⅜	14½	
Pet HLP x	0.31	12	28	10⅛	10⅛	10⅛	
Phil LD	0.16	8	1048	u20½	20	20½	+½
Pitney A		11	7	27⅜	27¼	27¼	-⅛
Ply Gem x	0.12	58	15	7	7	7	-⅛

NASDAQ NATIONAL MARKET

3:15 pm prices May 20

- X - Y - Z -

Stock	Div.	P/E	Sls 100s	High	Low	Last	Chng
Xilinx		30	262	22	21¼	21½	-½
XL Data		14	134	6⅛	6¼	6⅝	+⅛
Xoma Corp		14	995	26¾	26¼	26½	
YankeeEnS	1.52	17	208	u23¾	22	23	
Yellow Fr	0.94	14	312	30⅞	29⅞	30⅛	+⅛
York Rsch		19	567	19½	19	19½	+⅛
ZionsUtah	1.44	9	z100	42⅛	42¼	42	-¼

K-Mart unveils 7% rise in income

By Karen Zagor in New York

K-MART, the world's second biggest retailer, yesterday unveiled a 7 per cent improvement in first-quarter net income on sales which advanced 9 per cent.

For the three months ended May 1, K-Mart raised net income to $107.5m, or 53 cents a share, against $100.1m, or 50 cents, a year ago. Sales advanced to $7.64bn from $7.04bn.

The results were at the high end of expectations, and shares in K-Mart gained $1¼ to $41⅛ at midday yesterday.

Mr Joseph Antonini, chairman and chief executive, said the company was encouraged by the results "as favourable comparisons were achieved despite the difficult economic environment throughout the period".

He added that customers had reacted favourably to the company's merchandising programmes.

Selling, general and administrative expenses rose 4 per cent in the quarter to $1.7bn from $1.64bn.

K-Mart's gross margin in the quarter decreased to 24.8 per cent of sales from 26 per cent a year ago, reflecting a greater sales contribution from the company's lower-margined PACE Membership Warehouse business, and increased clearance mark-downs of winter apparel at the beginning of the quarter.

The pre-tax last-in first-out charge was $30m in 1991 compared with $32.5m a year earlier.

K-Mart, which enlarged, refurbished or relocated 87 stores in the first quarter, said it planned to complete its programme for 450 to 500 projects by the end of the year.

K-Mart operates 2,387 K-Mart stores and is the parent company for Pay Less Drug Stores, Builders Square, Waldenbooks, PACE Membership Warehouse and The Sports Authority.

NY landmark up for sale

THE MOST famous skyscraper in America – the Empire State Building – has been put up for sale by its owner, Prudential Life Insurance Company of America, for about $50m, Reuter reports.

Prudential was not available for comment on why it was up for sale, but there is speculation that the company might be under pressure to raise capital to offset bad real estate loans.

It is considered a bargain at today's real estate prices because a master lease, in effect since 1961, ties up actual control of the skyscraper until the year 2076. Without that master lease, real estate experts say the price of the building would be over $600m.

Prudential owns the building and the land it sits on at 34th Street and Fifth Avenue. It receives $3.4m a year for the building, but this will be cut to $2m next year.

The two real estate partnerships that manage the building keep all the profits from renting it above the fee paid to Prudential until their lease runs out in 2076, when the building will be 145 years old.

Toys 'R' Us falls to $22.4m

By Karen Zagor

TOYS "R" Us, the US chain of toy stores, yesterday turned in first-quarter net earnings of $22.4m, or 8 cents a share, compared with $33.2m, or 11 cents, a year earlier, although sales rose 9 per cent to $1.03bn from $944.8m.

Mr Charles Lazarus, chairman and chief executive, said sales had increased in all three of the company's segments.

The results were in line with expectations and, at mid-session, shares in Toys "R" Us were unchanged at $27⅞ on the New York Stock Exchange.

The company was one of the last US retailers to feel the bite of the recession, but quarterly earnings started to slide in the Christmas quarter, largely due to aggressive discounting and promotions by other toy sellers.

Mr Lazarus said the store expansion programme was on schedule. The company operates 451 toy stores in the US, 97 toy stores overseas and 180 Kids "R" Us children's clothing stores. It plans to open about 80 toy stores, including its first in Japan and Spain.

CRA extends CAIL bid as acceptances fall short of target

By Kevin Brown in Sydney

CRA, the Australian mining group, yesterday extended its takeover offer for Coal and Allied Industries (CAIL) for the second time after its bid of A$8.50 a share failed to attract sufficient support for control.

CRA, 49 per cent owned by RTZ of the UK, said it had received acceptances for 33 per cent of CAIL's voting shares – well short of its target of 50.1 per cent.

The group said it had extended the offer until Friday to allow time for further acceptances to arrive "from individual shareholders and institutions who have had practical difficulties in accepting the offer".

Mr Duncan Sutherland, CRA's vice-president for strategy and acquisitions, said the group was hopeful that a "not insignificant number" of further shareholders would accept the bid, which values CAIL at A$472m (about US$370). Mr Sutherland said CRA believed several larger shareholders would accept the offer because of concerns about the reduced liquidity of the shares and the likelihood of a fall in the market price, which has been buoyed by the bid.

The offer was increased from A$7.85 a share and declared unconditional last week after CRA received only a handful of acceptances for its original bid, which valued the company at A$435.

The shares closed 4 cents lower last night at A$8.54, 4 cents above the offer price.

The acquisition of CAIL would probably allow CRA to overtake the Broken Hill Proprietary Company as Australia's biggest coal exporter by the middle of the decade.

CAIL directors have argued that the bid does not adequately reflect the strategic value to CRA of its low-cost coal mines.

Barlow Rand falls by 14% on steel unit loss

By Philip Gawith

BARLOW RAND, South Africa's largest industrial group, yesterday announced a 14 per cent profits decline in the six months to March as Middelburg Steel, a big subsidiary, suffered a loss.

Turnover rose 12 per cent to R15.5bn ($5.55bn), but pressure on margins saw operating profit 1 per cent lower at R1.2bn.

Attributable profit was down to R348m from R403m. The dividend was maintained at 51 cents per share.

The lower profits reflect the R17m loss at Middelburg Steel which is suffering from oversupply in the world ferrochrome market and a strong rand. Barlows has announced it will be reducing its stake in wholly-owned Middelburg Steel later this year by a free distribution of shares to Barlow shareholders. This will make the group less susceptible to Middelburg Steel's cyclical earnings.

On the industrial side, good performances by sugar, Tiger Foods and pharmaceutical companies in particular saw contributions from food and pharmaceuticals rise 16 per cent to contribute 34 per cent of group profits. This was offset by a 27 per cent decline in the contribution from mining and processed minerals to only 22 per cent of the group total.

● RAND MINES, the mining house controlled by Barlow Rand, said it might cut its annual dividend by up to 50 per cent because of restructuring costs.

The costs relate to the imminent disposal of its troubled Barplats/Barmines platinum interests. Negotiations with Impala Platinum on the disposal of the platinum interests have reached an "advanced stage".

Mr Dammy Watt, chairman, said an agreement with Impala would involve Rand Mines assuming about R200m of Barmines debt. It would also be followed by a Rand Mines write-down of its platinum investments.

At current share price levels this would total about R430m.

Attributable profit rose 8 per cent to R104.3m from R96.6m in the six months to the end of March on a 13 per cent increase in turnover to R856.6m.

The interim dividend was reduced to 100 cents per share from 120.

Interpublic takes control of TV game show group

By Alice Rawsthorn

INTERPUBLIC, one of the largest US marketing groups, has become the biggest player in television games shows by taking control of Fremantle International, which owns the rights to The Price is Right, Family Feud and The Dating Game.

The company has increased its holding in Fremantle to 80 per cent for an undisclosed sum.

The remaining shares are owned by Mr Paul Talbot, who will continue as president.

Fremantle specialises in buying the rights to US games shows and "repackaging" them for sale to television companies in other countries. The Dating Game, for instance, has been repackaged as Blind Date for the UK.

The Price is Right, its most successful show, is now sold all over western Europe and is shown seven days a week on the TF1 channel in France. Fremantle has six shows a day on TF1 and seven a day on Channel 5 in Italy.

Interpublic, which owns the McCann-Erickson and Lintas international advertising agencies, first became involved with Fremantle two years ago when it bought 49 per cent of the equity.

The Interpublic agencies have led the trend for large advertising groups to become more involved with programme production. Lintas has a production subsidiary, EC Television, which distributes Wheel of Fortune, the games show, and recently produced Riviera, the first pan-European soap opera.

Japanese property income lags expansion in sales

By Neil Weinberg in Tokyo

THREE leading Japanese real estate companies, Mitsui Real Estate, Mitsubishi Estate and Sumitomo Realty, enjoyed strong sales growth in the year to end-March 1991, but pre-tax profits did not keep pace under tighter financial conditions.

Mitsui Real Estate's sales rose 22.2 per cent to Y738.28bn, ($5.31bn) although pre-tax profits were up only 8.7 per cent to Y57.31bn as the company's interest burden climbed Y19.5bn to Y60.35bn.

Mitsui expects sales for the current year to surge to Y950bn, although pre-tax profits will remain virtually flat at Y58bn.

Mitsubishi Estate's sales climbed 7.5 per cent to Y338.41bn as land and office leasing income rose 8.7 per cent, while pre-tax profits were up 5.3 per cent to Y89.93bn.

Sales in the current fiscal year are forecast to increase to Y350bn while profits will rise slightly to Y90bn.

Sumitomo Realty's sales gained 15.6 per cent to Y187.17bn, and pre-tax profits 6 per cent to Y36.36bn, failing to reach double-digit growth for the first time in 11 years.

The strong sales performance was supported by leasing activities, which grew 25.1 per cent as 19 new office buildings came into operation.

Sales for the current year are projected to rise 12.2 per cent to Y210bn.

However, pre-tax profits are expected to be only marginally higher at Y37bn, due to the increased debt burden.

Hanwa falls by 1.8% to Y37.6bn

By Emiko Terazono in Tokyo

HANWA, the Japanese trading company led by Mr Shigeru Kita, reported a 1.8 per cent drop in its unconsolidated pre-tax profits to Y37.6bn ($270.50m) for the year to March 1991.

The company, known within the Japanese financial community for its aggressive speculation in the currency markets, said that despite the strong performances in its steel-related operations, appraisal losses on its cross-shareholdings and securities investment had hurt profits. Overall sales increased 0.2 per cent to Y773bn.

Operating profit rose 46.2 per cent due to lower fixed costs and selective orders. After-tax profit fell 7 per cent to Y20.4bn. Hanwa said it will reduce its annual dividend to Y18 per share from the previous year's Y15.25.

For the current year, Hanwa expects pre-tax profits to rise 6.2 per cent to Y40bn.

Koor back to profits at operating level

By Hugh Carnegy in Jerusalem

KOOR Industries, the trade union-owned Israeli group that has waged a four-year battle against liquidation, yesterday reported a big reduction in losses in 1990 and a return to significant profits at the operating level for the first time since the mid-1980s.

Inflation-adjusted losses at the country's biggest industrial group – whose interests include construction, chemicals, food and high-technology – were down to Shk99m ($48.34m) from 1989's record Shk700m as a restructuring began to show results.

Koor said "irrefutable evidence" of the turnround lay in the operating profit of Shk150m, against a profit of Shk3m in 1989 and an operating loss of Shk500m in 1987 at the height of Koor's troubles. Sales totalled Shk5.1bn, down more than 5 per cent from Shk5.4bn in 1989.

However, Mr Benjamin Gaon, Koor's chief executive, said the group's survival still rested on a rescheduling and write-off arrangement covering its debts, which total more than $1bn. Koor has not paid any principal or interest on its debts since the end of 1989.

Under the latest plan, which would reduce outstanding debts to $700m, the government has agreed to provide some $50m in guarantees, and Hevrat Ha'ovdim, the industrial arm of the Histadrut trade union federation which owns Koor, has agreed to inject $25m in new equity capital and accept a rundown in its shareholding to 26 per cent.

Israeli and US bondholders have agreed a write-down and debt-equity swap arrangement. But the biggest creditors, the Israeli and foreign bank creditors, have yet to finalise terms. Mr Gaon said he was optimistic this would would happen by September 30.

Most of the 1990 losses were accounted for by Koor's perennial problem units, Tadiran and Soltam, which respectively showed losses of Shk54m and Shk49m.

Printer's sales pass Y1,000bn

By Neil Weinberg

DAI Nippon Printing, Japan's largest printing company, lifted pre-tax profits by 4.6 per cent to Y74.37bn ($534.96m) on a 7.8 per cent increase in sales to Y1,031bn in the year to end-March 1991.

It plans a memorial dividend of Y2.5 per share to celebrate sales above Y1,000bn for the first time. The payment will bring total dividends for the year to Y7.5 per share.

Control component maker advances 2% to Y27.78bn

OMRON, Japan's top maker of control components, reported a 2.3 per cent rise in pre-tax profit to Y27.78bn ($199.78m) for the year to the end of March, writes Neil Weinberg in Tokyo.

Total sales for the period were Y376.53bn, up 7.4 per cent from a year earlier, reflecting the continued growth in the Japanese economy.

Omron expects sales for the current year to increase about 12 per cent to Y420bn on strong sales of its mainline control components, health care and office automation products.

However, pre-tax profits are forecast to decline slightly to Y26bn due to increased investments in plant and equipment under the company's Golden 90s Plan, a company spokesman said.

Rothmans Holdings turns in A$107m in competitive market

By Kevin Brown in Sydney

ROTHMANS Holdings, a subsidiary of Rothmans International, yesterday announced a net profit of A$107m (US$83.5m), after extraordinary items, for the year to March 31 on sales of A$1.62bn.

Rothmans said the result was "pleasing" in the light of strong competition in the Australian tobacco market, notably from Philip Morris of the US and W.D. & H.O. Wills of the UK.

The group said profit had increased by less than the rate of inflation, but the result was not comparable with earnings of A$85.7m for the previous period, which was shortened to nine months because of a change in accounting policy.

The net profit was struck after an extraordinary charge of A$10.9m, reflecting the cost of withdrawal from the wholesale distribution and warehousing of confectionery.

The directors said the final dividend would be 37 cents, making a total of 68 cents a share, fully franked. Rothmans paid a total dividend of 47 cents a share in the previous period.

The share price rose 15 cents to a record A$12.90 on the Australian Stock Exchange following the result.

Mr John Utz, chairman, said: "The intense competitive activity in the industry throughout the region is unlikely to abate, but the immediate and long term outlook for the group is positive," he said.

Adsteam shares fall after exchange lifts suspension

By Kevin Brown

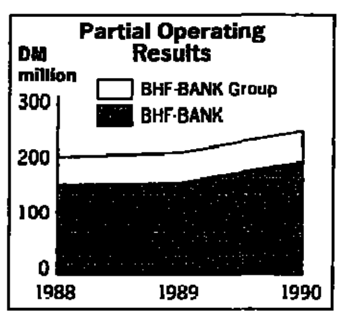
SHARES in two of the main companies in the loosely-knit Adelaide Steamship group were marked down heavily yesterday when a three-week suspension was lifted by the Australian Stock Exchange.

Adelaide Steamship, the flagship company, closed 25 per cent lower at 9 cents, and David Jones, the retailing group, closed down 13 cents at 30 cents. However, shares in Tooth, an investment company, rose by 4 cents to 38 cents.

Trading in the three was suspended after the collapse of a reconstruction plan which would have led to a merger with Industrial Equity, a jointly-owned subsidiary which owns the successful Woolworths supermarket chain and other assets. The stock exchange is believed to have dropped plans to reinstate the shares last week after the leaking of a prospectus for National Foods, a new company being floated to acquire some of the leading brands owned by Industrial Equity.

The exchange agreed to lift the suspension after the prospectus was registered with the Australian Securities Commission, the corporate watchdog.

The Adelaide Steamship group, formerly controlled by Mr John Spalvins, has until the end of the year to negotiate a reconstruction with its bankers, following a moratorium on the group's A$6bn (US$4.60bn) debts.



FT GUIDE TO WORLD CURRENCIES

The table below gives the latest available rates of exchange (rounded) against four key currencies on Monday, May 20, 1991. In some cases the rate is nominal. Market rates are the average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated from those of foreign currencies to which they are tied.

COUNTRY		£ STG	US $	D-MARK	YEN (X 100)
Afghanistan	(Afghani)	99.25	57.737	33.4175	41.7894
Albania	(Lek)	9.8910	5.7539	3.3303	4.1646
Algeria	(Dinar)	29.60	17.2193	9.9663	12.4631
Andorra	(Fr Fr)	10.0775	5.8624	3.393	4.2431
	(Sp Peseta)	183.60	106.806	61.8181	77.3052
Angola	(Kwanza)	106.75(1)	62.1	35.9427	44.9473
Antigua	(E Carr $)	4.5995	2.6756	1.5486	1.9366
Argentina	(Austral)	16873.05	9815.62	5681.16	7104.44
Aruba	(Florin)	3.0495	1.7739	1.0267	1.284
Australia	(Aus $)	2.1985	1.2789	0.7402	0.9256
Austria	(Schilling)	20.845	12.1262	7.0185	8.7768
Azores	(Port Escudo)	260.10	151.309	87.5757	109.516
Bahamas	(Bahama $)	1.7190	1	0.5787	0.7237
Bahrain	(Dinar)	0.6345	0.3691	0.2136	0.2671
Balearic Is	(Sp Peseta)	183.60	106.806	61.8181	77.3052
Bangladesh	(Taka)	58.00	33.7405	19.5286	24.421
Barbados	(Barb $)	3.4260	1.993	1.1535	1.4425
Belgium	(Belg Fr)	61.10	35.5439	20.5723	25.7263
Belize	(B $)	3.4070	1.9819	1.1471	1.4345
Benin	(CFA Fr)	503.88	293.124	169.657	212.16
Bermuda	(Bermudian $)	1.7190	1	0.5787	0.7237
Bhutan	(Ngultrum)	34.80	20.2443	11.7171	14.6526
Bolivia	(Boliviano)	6.0475	3.518	2.0361	2.5463
Botswana	(Pula)	3.4830	2.0261	1.1727	1.4665
Brazil	(Cruzeiro)	471.00	273.997	158.586	198.316
Brunei	(Brunei $)	3.0315	1.7635	1.0207	1.2764
Bulgaria	(Lev)	39.87	23.1937	13.4242	16.7873
Burkino Faso	(CFA Fr)	503.88	293.124	169.657	212.16
Burma	(Kyat)	11.4572	6.665	3.8576	4.824
Burundi	(Burundi Fr)	296.50	172.484	99.8316	124.842
Cambodia	(Riel)	783.60	455.846	263.838	329.937
Cameroon	(CFA Fr)	503.88	293.124	169.657	212.16
Canada	(Canadian $)	1.9770	1.15	0.6656	0.8324
Canary Is	(Sp Peseta)	183.60	106.806	61.8181	77.3052
Cp. Verde	(CV Escudo)	125.00	72.7166	42.0875	52.6315
Cayman Is	(CI $)	1.4140	0.8225	0.476	0.5953
Cent. Afr. Rep	(CFA Fr)	503.88	293.124	169.657	212.16
Chad	(CFA Fr)	503.88	293.124	169.657	212.16
Chile	(Chilean Peso)	609.00	354.276	205.051	256.421
China	(Renminbi Yuan)	9.1025(4)	5.2952	3.0648	3.8326
Colombia	(Col Peso)	1047.10	609.133	352.559	440.884
Comoros	(CFA Fr)	503.88	293.124	169.657	212.16
Congo (Brazz)	(CFA Fr)	503.88	293.124	169.657	212.16
Costa Rica	(Colon)	204.55	118.994	68.872	86.1263
Côte d'Ivoire	(CFA Fr)	503.88	293.124	169.657	212.16
Cuba	(Cuban Peso)	1.3570	0.7894	0.4569	0.5713
Cyprus	(Cyprus £)	0.8140	0.4735	0.274	0.3427
Czechoslovakia	(Koruna)	51.79c	30.1279	17.4377	21.8063
		49.96t	29.0634	16.8215	21.0357
Denmark	(Danish Kroner)	11.3625	6.6099	3.8257	4.7842
Djibouti Rep	(Djib Fr)	301.00	175.102	101.347	126.737
Dominica	(E Carrib $)	4.5995	2.6756	1.5486	1.9366
Dominican Rep	(D Peso)	21.8050	12.6847	7.3417	9.181
Ecuador	(Sucre)	1861.91o	1083.14	626.906	783.962
		1616.43a	940.332	544.253	680.602
Egypt	(Egyptian £)	5.6350	3.278	1.8973	2.3726
El Salvador	(Colon)	13.7220	7.9825	4.6202	5.7776
Equat'l Guinea	(CFA Fr)	503.88	293.124	169.657	212.16
Ethiopia	(Ethiopian Birr)	3.5085	2.041	1.1813	1.4772
Falkland Is	(Falk £)	1.00	0.5817	0.3367	0.421
Faroe Is	(Danish Kroner)	11.3625	6.6099	3.8257	4.7842
Fiji Is	(Fiji $)	2.5330	1.4735	0.8528	1.0665
Finland	(Markka)	6.9505	4.0433	2.3402	2.9265
France	(Fr)	10.0775	5.8624	3.393	4.2431
Fr. Cty/Africa	(CFA Fr)	503.88	293.124	169.657	212.16
Fr. Guiana	(Local Fr)	10.0775	5.8624	3.393	4.2431
Fr. Pacific Is	(CFP Fr)	182.00	105.876	61.2794	76.6315
Gabon	(CFA Fr)	503.88	293.124	169.657	212.16
Gambia	(Dalasi)	14.7235	8.5651	4.9574	6.1993
Germany	(D-Mark)	2.9700	1.7277	1	1.2505

COUNTRY		£ STG	US $	D-MARK	YEN (X 100)
Ghana	(Cedi)	618.13	359.587	208.125	260.265
Gibraltar	(Gib £)	1.00	0.5817	0.3367	0.421
Greece	(Drachma)	324.80	188.947	109.36	136.758
Greenland	(Danish Krone)	11.3625	6.6099	3.8257	4.7842
Grenada	(E Carr $)	4.5995	2.6756	1.5486	1.9366
Guadaloupe	(Local Fr)	10.0775	5.8624	3.393	4.2431
Guam	(US $)	1.7190	1	0.5787	0.7237
Guatemala	(Quetzal)	8.5155	4.9537	2.8671	3.5854
Guinea	(Fr)	1056.15a	614.398	355.606	444.695
		511.05n	297.295	172.071	215.179
Guinea-Bissau	(Peso)	1107.25	644.124	372.811	466.211
Guyana	(Guyanese $)	196.30	114.194	66.0942	82.6526
Haiti	(Gourde)	8.5175	5	2.8678	3.5863
Honduras	(Lempira)	9.0945	5.2905	3.0621	3.8292
Hong Kong	(HK $)	13.3515	7.767	4.4954	5.6216
Hungary	(Forint)	130.85	76.1198	44.0572	55.0947
Iceland	(Icelandic Krona)	104.35	60.7038	35.1346	43.9368
India	(Indian Rupee)	34.80	20.2443	11.7171	14.6526
Indonesia	(Rupiah)	3315.35	1928.65	1116.28	1395.94
Iran	(Rial)	119.10	69.2844	40.101	50.1473
Iraq	(Iraqi Dinar)	0.5935	0.3452	0.1998	0.2498
Irish Rep	(Punt)	1.1080	0.6445	0.373	0.4665
Israel	(Shekel)	4.0400	2.3502	1.3602	1.701
Italy	(Lira)	2204.25	1282.29	742.172	928.105
Jamaica	(Jamaican $)	13.95	8.1151	4.6969	5.8736
Japan	(Yen)	237.50	138.162	79.9663	100
Jordan	(Jordanian Dinar)	1.1391	0.6626	0.3835	0.4796
Kenya	(Kenya Shilling)	46.9315	27.3016	15.8018	19.7606
Kiribati	(Australian $)	2.1985	1.2789	0.7402	0.9256
Korea North	(Won)	1.6525	0.9613	0.5563	0.6957
Korea South	(Won)	1235.00	718.441	415.825	520
Kuwait $	(Kuwaiti Dinar)				
Laos	(New Kip)	1192.45	693.688	401.498	502.084
Lebanon	(Lebanese £)	1566.20	911.111	527.34	659.453
Lesotho	(Maluti)	4.8200	2.8039	1.6228	2.0294
Liberia	(Liberian $)	1.7190	1	0.5787	0.7237
Libya	(Libyan Dinar)	0.4895	0.2847	0.1648	0.2061
Liechtenstein	(Swiss Fr)	2.5075	1.4586	0.8442	1.0557
Luxembourg	(Lux Fr)	61.10	35.5439	20.5723	25.7263
Macao	(Pataca)	13.7240	7.9837	4.6208	5.7785
Madagascar	(MG Fr)	2934.00	1706.81	987.879	1235.37
Madeira	(Port Escudo)	260.10	151.309	87.5757	109.516
Malawi	(Kwacha)	4.8380	2.8144	1.6289	2.037
Malaysia	(Ringgit)	4.7385	2.7565	1.5954	1.9951
Maldive Is	(Rufiya)	17.00	9.8894	5.7239	7.1578
Mali Rep	(CFA Fr)	503.88	293.124	169.657	212.16
Malta	(Maltese £)	0.5680	0.3304	0.1912	0.2391
Martinique	(Local Fr)	10.0775	5.8624	3.393	4.2431
Mauritania	(Ouguiya)	142.72	83.025	48.0538	60.0926
Mauritius	(Maur Rupee)	27.30	15.8813	9.1919	11.4947
Mexico	(Mexican Peso)	5125.30a	2981.56	1725.69	2158.02
		5101.95d	2967.98	1717.83	2148.19
Miquelon	(Local Fr)	10.0775	5.8624	3.393	4.2431
Monaco	(French Fr)	10.0775	5.8624	3.393	4.2431
Mongolia	(Tugrik)	5.7160	3.3251	1.9245	2.4067
Montserrat	(E Carr $)	4.5995	2.6756	1.5486	1.9366
Morocco	(Dirham)	14.7775	8.5965	4.9755	6.2221
Mozambique	(Metical)	2376.35	1382.4	800.118	1000.57
Namibia	(S A Rand)	4.8200	2.8039	1.6228	2.0294
Nauru Is	(Australian $)	2.1985	1.2789	0.7402	0.9256
Nepal	(Nepalese Rupee)	54.9905	31.9898	18.5153	23.1538
Netherlands	(Guilder)	3.3450	1.9458	1.1262	1.4084
N'nd Antilles	(A/Guilder)	3.0495	1.7739	1.0267	1.284
New Zealand	(NZ $)	2.9190	1.698	0.9828	1.229
Nicaragua	(Gold Cordoba)	8.5175	4.9549	2.8678	3.5863
Niger Rep	(CFA Fr)	503.88	293.124	169.657	212.16
Nigeria	(Naira)	16.0130	9.3152	5.3915	6.7423
Norway	(Nor. Krone)	11.5425	6.7146	3.8863	4.86
Oman	(Rial Omani)	0.6516	0.379	0.2193	0.2743

COUNTRY		£ STG	US $	D-MARK	YEN (X 100)
Pakistan	(Pak. Rupee)	39.40	22.9209	13.2659	16.5894
Panama	(Balboa)	1.7190	1	0.5787	0.7237
Papua New Guinea	(Kina)	1.6205	0.9426	0.5456	0.6823
Paraguay	(Guarani)	2266.30	1318.38	763.064	954.232
Peru	(New Sol)	1.3800	0.8027	0.4646	0.581
Philippines	(Peso)	45.00	26.178	15.1515	18.9473
Pitcairn Is	(£ Sterling)	1.00	0.5817	0.3367	0.421
	(NZ $)	2.9190	1.698	0.9828	1.229
Poland	(Zloty)	19393.0(7)	11281.6	6529.63	8165.47
Portugal	(Escudo)	260.10	151.309	87.5757	109.516
Puerto Rico	(US $)	1.7190	1	0.5787	0.7237
Qatar	(Riyal)	6.1607	3.5838	2.0743	2.5939
Reunion Is. de la	(F/Fr)	10.0775	5.8624	3.393	4.2431
Romania	(Leu)	103.98(3)	60.4886	35.0101	43.781
Rwanda	(Fr)	214.215	124.616	72.1262	90.1957
St Christopher	(E Carr $)	4.5995	2.6756	1.5486	1.9366
St Helena	(£)	1.00	0.5817	0.3367	0.421
St Lucia	(E Carr $)	4.5995	2.6756	1.5486	1.9366
St Pierre	(French Fr)	10.0775	5.8624	3.393	4.2431
St Vincent	(E Carr $)	4.5995	2.6756	1.5486	1.9366
San Marino	(Italian Lira)	2204.25	1282.29	742.172	928.105
Sao Tome	(Dobra)	318.55(6)	185.311	107.256	134.126
Saudi Arabia	(Riyal)	6.3475	3.6925	2.1372	2.6726
Senegal	(CFA Fr)	503.88	293.124	169.657	212.16
Seychelles	(Rupee)	8.95	5.2065	3.0134	3.7684
Sierra Leone	(Leone)	376.50	219.023	126.768	158.526
Singapore	($)	3.0315	1.7635	1.0207	1.2764
Solomon Is	($)	4.3780	2.5468	1.474	1.8433
Somali Rep	(Shilling)	4463.15	2596.36	1502.74	1879.22
South Africa	(Rand)	4.8200c	2.8039	1.6228	2.0294
		5.6645g	3.2952	1.9072	2.385
Spain	(Peseta)	183.60	106.806	61.8181	77.3052
Spanish Ports in N Africa	(Sp Peseta)	183.60	106.806	61.8181	77.3052
Sri Lanka	(Rupee)	68.00	39.5578	22.8956	28.6315
Sudan Rep	(£)	7.6660o	4.4595	2.5811	3.2277
		19.5050g	11.3467	6.5673	8.2126
Surinam	(Guilder)	3.0405	1.7687	1.0237	1.2802
Swaziland	(Lilangeni)	4.8200	2.8039	1.6228	2.0294
Sweden	(Krona)	10.6825	6.2143	3.5968	4.4978
Switzerland	(Fr)	2.5075	1.4586	0.8442	1.0557
Syria	(£)	35.7735	20.8106	12.0449	15.0625
Taiwan	($)	46.80	27.2251	15.7575	19.7052
Tanzania	(Shilling)	371.35	216.027	125.034	156.358
Thailand	(Baht)	42.00	24.4328	14.1414	17.6842
Togo Rep	(CFA Fr)	503.88	293.124	169.657	212.16
Tonga Is	(Pa Anga)	2.1985	1.2789	0.7402	0.9256
Trinidad/Tobago	($)	7.2400	4.2117	2.4377	3.0484
Tunisia	(Dinar)	1.6530	0.9616	0.5565	0.696
Turkey	(Lira)	6916.87(2)	4023.78	2328.91	2912.37
Turks & Caicos	(US $)	1.7190	1	0.5787	0.7237
Tuvalu	(Australian $)	2.1985	1.2789	0.7402	0.9256
Uganda	(New Shilling)	1144.80	665.969	385.455	482.021
U A E	(Dirham)	6.2160	3.616	2.0929	2.6172
United Kingdom	(£)	1.00	0.5817	0.3367	0.421
United States	(US $)	1.7190	1	0.5787	0.7237
Uruguay	(Peso)	3212.75	1868.96	1081.73	1352.74
USSR	(Rouble)	1.0188o	0.5926	0.343	0.4289
		3.0564c	1.778	1.029	1.2869
Vanuatu	(Vatu)	189.00	109.948	63.6363	79.5789
Vatican	(Lira)	2204.25	1282.29	742.172	928.105
Venezuela	(Bolivar)	93.8995	54.6244	31.6159	39.5366
Vietnam	(Dong)	13457.65	7828.77	4531.2	5666.38
Virgin Is-British	(US $)	1.7190	1	0.5787	0.7237
Virgin Is-US	(US $)	1.7190	1	0.5787	0.7237
Western Samoa	(Tala)	4.03	2.3443	1.3569	1.6968
Yemen	(Rial)	20.5270	11.9412	6.9114	8.6429
Yemen PDR	(Dinar)	0.7855	0.4569	0.2644	0.3307
Yugoslavia	(Dinar)	38.3545(5)	22.4284	12.9813	16.2334
Zaire Rep	(Zaire)	7170.00	4171.03	2414.14	3018.95
Zambia	(Kwacha)	98.30	57.1844	33.0976	41.3894
Zimbabwe	($)	5.2470	3.0523	1.7666	2.2092

Special Drawing Rights May 17, 1991 United Kingdom £0.774433 United States $1.34883 Germany D Mark 2.29706 Japan Yen185.801
European Currency Unit Rates May 20, 1991 United Kingdom £1.694351 United States $1.20796 Germany D Mark 2.05776 Japan Yen166.396

Abbreviations: (a) Free rate; (b) Banknote rate; (c) Commercial rate; (d) Controlled rate; (e) Essential imports; (g) Financial rate; (h) Exports; (i) Non commercial rate; (j) Business rate; (k) Buying rate; (l) Luxury goods; (m) Market rate; (n) Public transaction rate; (o) Official rate; (p) preferential rate; (q) convertible rate; (r) parallel rate; (s) Selling rate; (t) Tourist rate (u) Currencies fixed against the US Dollar;
Some data supplied by Bank of America, Economics Department, London Trading Centre. Enquiries: 071 634 4360/5.
Monday, May 13, 1991. (1) Angolan Kwanza devalued to 60 to the US Dollar, March 18. (2) Turkey revalued by 14%, March 26. (3) Romanian Leu devalued by 42%, April 8. (4) Chinese Yuan devalued by 0.95%, April 10. (5) Yugoslavian Dinar devalued by 31%, April 19. (6) Sao Tome Dobra devalued by 21.5%, May 16. (7) Polish Zloty devalued by 14.4%, May 17.

INTERNATIONAL CAPITAL MARKETS

Treasury prices firm on hopes of interest rate cut

By Patrick Harverson in New York and Sara Webb in London

SUGGESTIONS that Mr Alan Greenspan, chairman of the Federal Reserve, might be considering further interest rate cuts, helped US bond prices firm in early trading yesterday. However, the market fell back later as dealers prepared for this week's large Treasury offerings.

By midday, the benchmark 30-year government bond was down 1/32 at 98⅝, to yield 8.267 per cent.

The two-year note held on to its morning gains, standing up 1/32 at 100⅛, to carry a yield of 6.805 per cent. The early gains in prices followed reports that Mr Greenspan had said the Fed saw a risk that more action would have to be taken to ensure the economy recovered from the present recession. His comments, in a letter to a member of the Senate banking committee, immediately raised hopes that a further interest

BENCHMARK GOVERNMENT BONDS		Coupon	Red Date	Price	Change	Yield	Week ago	Month ago
UK GILTS		13.500	09/92	103-20	+02/32	10.48	10.42	10.54
		9.000	08/00	92-21	+06/32	10.28	10.18	10.14
		9.000	10/08	91-10	+12/32	10.08	9.96	9.88
US TREASURY *		7.750	02/01	99-13	+00/32	8.09	8.09	8.06
		7.875	02/21	98-08	+02/32	8.28	8.30	8.21
JAPAN	No 119	4.800	6/99	88.5879	+0.025	7.01	7.07	7.09
	No 129	6.400	03/00	96.7733	-	6.62	6.64	6.72
GERMANY		9.000	01/01	103.7800	+0.100	8.40	8.42	8.41
FRANCE	BTAN	9.000	02/96	100.2000	+0.091	8.92	8.92	9.08
	OAT	9.500	01/01	104.0700	-	8.84	8.81	8.89
CANADA *		9.750	06/01	100.7500	-	9.63	9.62	9.67
NETHERLANDS		8.500	03/01	99.1300	+0.100	8.63	8.63	8.60
AUSTRALIA		13.000	07/00	114.4427	+0.379	10.50	10.95	10.98
BELGIUM		10.000	08/00	104.9000	+0.050	9.17	8.93	8.97

London closing, *denotes New York morning session
Yields: Local market standard. Prices: US, UK in 32nds, others in decimal
Technical Data/ATLAS Price Sources

GOVERNMENT BONDS

rate cut could be in the pipeline.

However, the burden of this week's Treasury auctions – $16bn of cash management bills today; $12.25bn of two-year notes tomorrow; and $9.25bn of five-year notes on Thursday – took the edge off the market's opening optimism, leaving prices in negative territory by the halfway mark.

■ SWEDISH government bonds jumped in reaction to the linkage of the Swedish Krona to the Ecu. Traders see the link as an indication that Swedish interest rates will fall in the next few months.

Although yields at first fell most on shorter-dated bonds, by the end of trading they had fallen 50 to 60 basis points across the range of maturities. Some traders think they could see a further half percentage point fall in yields today as Swedish investors return from their Pentecost holiday. Others, however, predict that domestic investors may sell out of shorter-dated bonds.

The yield on the 10-year bond fell from Friday's close of 10.95 per cent to 10.44 per cent. Among the shorter-dated bonds, the yield on the government bond due 1993 fell from 11.53 per cent on Friday to 10.97 per cent.

Though most of Europe was closed for the holiday yesterday, some Swedish traders did work. London-based traders said the dealing was mostly over-the-counter, rather than via the primary dealing system. Volumes were reported to be reasonable.

The National Debt Office is selling SKr5bn of the Series 1028 bond due 1999 – carrying an 11 per cent coupon – at auction today. Some dealers say the rally in the bond market yesterday could make it difficult to know how to place bids in the auction, leading to speculation that the "tail" (the range of bids submitted) could be quite long.

■ THE UK government bond market rallied following the US Treasury bond market's rise on Friday. The market held out hopes of a cut in the base rate after the release of weaker-than-expected retail sales figures.

Traders said the 10 per cent gilt due 1996 rose by 3/16 to 98⅝. By late afternoon, it was yielding 10.31 per cent. The benchmark 11¾ per cent gilt due 2003/07 traded up ⅜ to 108⅞ to yield 10.42 per cent.

■ JAPANESE government bonds also followed the US Treasuries' strong lead on Friday, with prices traded up yesterday.

The yield on the No 129 benchmark JGB moved from 6.61 per cent to 6.595 per cent, prompting quite heavy selling and a fall in prices. The yield on the No 128 closed in Tokyo at 6.63 per cent.

The volume in the cash market was low at Y748bn, as many European investors were on holiday, and traders are apprehensive about investor demand for this week's June auction of ten-year JGBs. They expect some Y900bn to be issued with a coupon of 6.5 per cent, slightly lower than in last month's auction when the coupon was 6.6 per cent.

Amex Bank sells LDC long-term debt

AMERICAN Express Bank is selling its remaining portfolio of long-term Less Developed Country debt to a leading, but unnamed, European bank. This completes a four-year plan to get out of the LDC term lending business, writes Martin Dixon in New York.

The portfolio of Latin American debt is valued by the bank at $351m. At the height of its third world debt exposure, in 1987, the bank carried $2.2bn of LDC borrowings on its balance sheet. This has been gradually whittled down through sales and debt/equity swaps.

Mr Steven Goldstein, the bank's president, said the sale would allow the bank to concentrate more closely on its core business of financial services to wealthy individuals, trade finance to businesses and correspondent banking services to financial institutions.

FT/AIBD INTERNATIONAL BOND SERVICE

Listed are the latest international bonds for which there is an adequate secondary market. Latest prices at 6:05 pm on May 20

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Chg. day	Yield
ABBEY NATIONAL 8 7/8 93	150	101¾	102¼		7.77
ALBERTA PROVINCE 9 3/8 95	600	103¾	104	+⅛	8.30
AUSTRIA 8 1/2 00	400	98¾	99¼	+⅛	8.68
BANK OF TOKYO 8 3/8 96	100	99	99½	+⅛	8.62
BELGIUM 9 1/8 92	400	101⅛	102	-⅛	7.93
BFCE 7 3/4 97	150	98¼	98½	+⅛	8.16
BNP 8 5/8 94	300	102	102½	+⅛	7.87
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

OTHER STRAIGHTS	Issued	Bid	Offer	Chg. day	Yield
ALBERTA PROVINCE 10 92 C$	500	100¼	100¾		9.82
BCE INC 9 5/8 95 C$	300	99¼	99¾		10.13
BELL CANADA 10 5/8 99 C$	150	99⅛	100¼		10.66
BRITISH COLUMBIA 9 1/4 93 C$	150	99	99½		9.84
EIB 10 1/8 98 C$	130	99½	100½	-⅛	10.21
FORD CREDIT CANADA 10 94 C$	100	98¼	98¾		10.64
GENERAL ELECT CAP 10 1/4 93 C$	175	100¾	101¼		9.88
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

INTERNATIONAL CAPITAL MARKETS

Japan Highway expected to launch $300m issue

By Simon London

JAPAN HIGHWAY, the Japanese government-backed agency, is expected to launch a $300m 10-year bond issue today in the international bond market.

The issue is expected to be lead-managed by IBJ and priced to yield around 45 basis points more than US Treasury securities.

Other borrowers may look to the dollar sector of the market this week. However, although

INTERNATIONAL BONDS

demand for Eurodollar securities is buoyant, interest rate and currency swaps opportunities are few and this is deterring potential borrowers.

Elsewhere, the European Investment Bank is preparing to launch a L500bn to L600bn 10-year issue, possibly tomorrow, lead managed by Banca Commerciale Italiana. Italian investors do not pay withholding tax on bonds issued by the EIB and syndicate officials anticipate that most of the issue will be sold to Italian investors.

Yesterday the market was subdued, with many European markets shut for public holidays. Bradford & Bingley became the latest UK mutual institution to issue sterling floating-rate notes, raising £100m over four years with a deal lead-managed by UBS Philips & Drew.

The notes pay a margin of ⅛ per cent over the London interbank offered rates and were re-offered to investors fo a fixed price of 99.54. At this price, the discounted margin is 26.62 basis points. The deal traded at 99.50 bid, against an issue price of par and full fees of 56 basis points.

The pricing was regarded as safe by participants in the deal, and underwriting fees of 10 basis points were seen as fair. Several established firms have declined to participate in many of the sterling floating-rate deals this year, including last week's £100m five-year deal by the Woolwich Building Society, because fees were seen to be an inadequate reflection of underwriting risk.

Yesterday's deal was priced to reflect the fact that the borrower, currently rated AA-3 by Moody's Investors Service, has been placed on credit watch and may soon be downgraded to single-A following the acquisition of the Leamington Spa Building Society.

The credit quality of many banks and building societies, at least as measured by credit rating agencies, has continued to decline this year. While the agencies sometimes disagree about the rating of each institution, the trend is still down.

Last week, Standard & Poor's downgraded the senior debt ratings of Banque Nationale de Paris and Societé Générale from AA+ to AA. Also last week, Moody's cut the senior debt rating of Bank of Scotland from Aa3 to A1.

Other big banks to have suffered downgradings this year include Barclays, which lost its coveted triple-A credit rating from S&P. It now stands at AA1.

Downgradings have come against a background of improving economic conditions in many of the big economies. Moreover, bond market investors have shown an increased willingness to buy securities issued by banks and yield spreads have narrowed significantly since early spring.

For example, National Westminster Bank's $750m subordinated debt issue was launched in the US market in late April at a spread of 140 basis points over US Treasuries. By the end of last week, the spread had narrowed to 120 basis points.

The Eurobond market is behind the US in the rehabilitation of financial institutions as broadly acceptable issuers. If the current trend continues, however, some variable rate note (VRN) issues may soon successfully complete their remarketing process.

The interest margin on VRNs is determined at a three-monthly remarketing or auction process, subject to an upper limit or "fall back" margin. If the fall-back margin is reached, the remarketing process is suspended, making the *instruments very hard to* trade.

So far this year, no VRN issue has completed a successful remarketing. All are illiquid in the hands of investors and are paying the fall-back interest rate.

Based on pure yield calculations, this could soon change. On a swapped basis, NatWest's subordinated Yankee bond issue now pays around 65 basis points over the London interbank offered rate. The bank's $200m VRN issue maturing August 2008 has a fall-back margin of 70 basis points over Libor.

However, many of the investors which bought VRNs to manage short-term liquidity may not be willing to risk being locked in at the fall-back margin again. These investors may now switch to other less complex forms of short-term investment, such as commercial paper, despite the rewards of VRNs in terms of absolute yield.

● BOC Group, the UK industrial gases group, has doubled the size of its sterling commercial paper programme to £100m. NatWest Capital Markets and Barclays de Zoete Wedd are dealers to the programme.

NEW INTERNATIONAL BOND ISSUES

Borrower	Amount m.	Coupon %	Price	Maturity	Fees	Book runner
US DOLLARS						
PT Indocem't Tunggal(a)§	100	(6¾-7)	100	2001	2½/1½	Goldman Sachs
Trigem Computer(b)§	30	3½	100	2005	2½/1½	Nomura Int.
STERLING						
Bradford & Bingley Bld.Soc.(c)#†	100	(c)	100	1995	56/46bp	UBS Phillips & Drew

★★Private placement. §Convertible. ♦With equity warrants. #Floating rate note. †Final terms. a) Callable at par at any time after 3 years. b) Put option on 4/8/98 to yield 7%. Callable from 4/8/93 at 104% declining by 1% per annum to 100%. Non-callable until 1/1/97 unless share price is 140% of conversion price. c) Coupon pays ⅛% over 3-month Libor. Non-callable.

Danish bank to handle big Polish brewery sale

By Xueling Lin in Copenhagen

SANKT Annf Bank, a small Danish bank, will handle an ambitious privatisation plan covering the entire Polish brewery sector.

The privatisation will cover 24 breweries valued at about $250m. It will involve the sale of shares in the state-owned breweries as well as a new rights issue.

Mr Kristof Zorde, director of Sankt Annf Bank, told a Danish newspaper the privatisation agreement with the Polish government represented a significant step for the bank. Sankt Annf was active in the privatisation of the Silesian Cable Factory, part of the first round of privatisations by the Polish government last year.

The latest agreement was signed with the Polish minister of privatisation, Mr Janusz Lewandowski.

"The privatisation is the first to cover not just a single factory but an entire industrial sector," said Mr Zorde. "The re-structuring of the brewery sector is a package deal which will cover everything from financing, management to social and health considerations."

The Polish breweries collectively produce about 12m hektolitres of beer and spirits a year, quantities which rival those produced by some of the largest breweries in the world.

The bank does not expect difficulties in the sale of the brewery shares, which are 100 per cent state-owned at present. The privatisation is expected to take place via "bundles" made up of existing shares in the breweries, which will be given a symbolic price, combined with a new rights issue at market value. Sale of the bundles will take place in Poland as well as overseas.

The structure for the privatisation has been worked out by Sankt Annf Bank. It expects the "bundle" system to be used again in subsequent privatisations in Poland if it proves successful for the breweries.

Mr Zorde said Polish breweries needed enormous investment because of a lack of basic manufacturing processes.

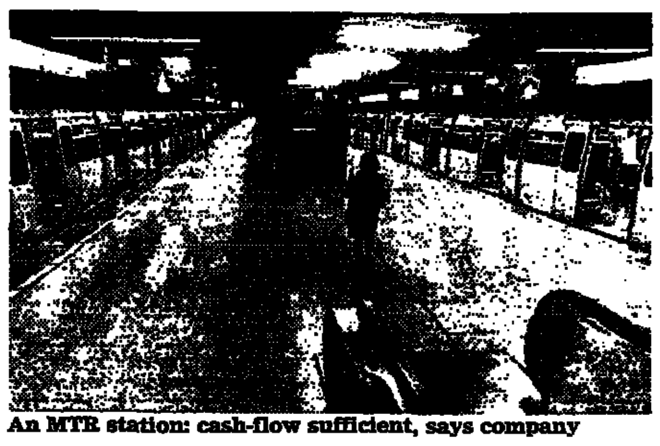
Keeping a tight timetable on debt

Tracy Corrigan finds MTR confident of holding down interest costs

HONG KONG'S largest borrower, Mass Transit Railway (MTR), has set itself some ambitious targets. The company plans to repay its HK$17bn (US$2.2bn) debt by the end of the decade and to refinance substantial borrowings ahead of and beyond the colony's return to Chinese rule in 1997.

At the same time, the company is trying to minimise its high interest costs against the negative impact of Hong Kong's political position and a worldwide squeeze on credit.

MTR, which carries 2m passengers a day, boasts a strong cash-flow, but expensive project financing has laden the company with its outstanding debt. Its interest costs last year came to HK$1.7bn.



An MTR station: cash-flow sufficient, says company

Mr Roger Moss, MTR's finance director, is confident the company's cash-flow is "sufficient to cover the heavy burden of interest, given our projected operating profits".

The need to counteract external uncertainties has fostered advance planning. The MTR finance team has projected cash-flows and borrowing plans years in advance, constructing a "preferred financing model" which is split into different types of debt according to business projections. For example, the company aims to hold 80 per cent of its borrowings in Hong Kong dollars.

"We look at our future financing requirements against the model, and against the reality of the markets," said Mr Roger Moss, MTR's finance director. The practical considerations of fund-raising can then be matched to theoretical requirements through the use of the swap market. (MTR's ability to use the swap market was written into its ordinances earlier this year, after a ruling that UK local authorities were not legally empowered to enter swap agreements prompted concern about MTR's status.)

Despite the political uncertainty facing Hong Kong, MTR's credit rating has held up relatively well. Its foreign *currency debt is rated A3 by* Moody's and A by Standard & Poor's, having dropped a notch after the Tiananmen Square massacre in 1989.

MTR has so far been able to press ahead with its financing plans. Next week, a Y5bn ($35.97m) *shibosai* – a private placement in the Japanese domestic market – will be signed. The seven-year deal is the first debt which matures after Hong Kong's return to China in 1997.

This week, MTR signed a US$100m five-year issue of floating-rate notes with Hong Kong dollar debt warrants attached.

These deals, added to a HK$750m loan facility arranged by Wardley, have allowed MTR to complete half its HK$4-5bn borrowing programme so far this year (MTR's financial year ends in December).

However, MTR has seen its *borrowing costs rise as a result* of Hong Kong's precarious position. In the last two years, MTR has been forced to raise its funding target by about 20 basis points, to around 45 basis points above the London interbank offered rate. However, concern about Hong Kong's political situation broadly coincided with a worldwide tightening of credit, as US banks were squeezed by recession, and Japanese banks struggled to meet new guidelines for capital. Consequently, Mr Moss says, it is difficult to apportion blame for the rise in funding costs.

But with many European and US borrowers having experienced similar increases in *costs of funds* – while China has had a hundred basis points added to its financing costs – MTR appears to have escaped relatively lightly.

Despite its recent achievement in funding a little beyond the date for Chinese rule, MTR is still struggling to extend its maturity profile, since nearly all its debt matures before 1997 and some will have to be refinanced.

"We like to have our financing pre-arranged 18 to 24 months ahead," said Mr Moss.

There is provision for pre-funding of up to HK$2bn, which is then invested in the financial markets.

Later this year, MTR will again look to Japan for financing, probably with a public issue in the domestic market. MTR is also considering setting up a US medium-term note programme, to complement its *Euro-MTN programme* (to which it also plans to add some dealers).

The company will consider carefully whether to use derivative products other than swaps to reduce costs. On two previous deals, MTR has sold floor options on the US dollar, to reduce overall funding costs. Those positions were not hedged, as the company was taking a view on the market.

Apasco places $50m in debentures

By Simon London

APASCO, the Mexican cement producer, has raised $50m of equity-linked capital from a placing of convertible subordinated debentures with international investors.

The placing was arranged by the International Finance Corporation, the arm of the World Bank devoted to the private sector in developing countries, and Bear Stearns.

The transaction is the first in which a Mexican company has issued convertible subordinated debentures in the international capital markets. It is also the first international issue of this kind to be arranged by the IFC.

The IFC is buying $20m of paper for its own account. Of the remaining $30m, about half was placed in the US and half with European investors, centred on London.

The six-year bonds were issued at par and carry a coupon of 9⅝ per cent, payable twice a year.

Conversion into Apasco common stock is based on a formula which takes into account the current market price of the shares and the company's book value per share, expressed in US dollars.

Apasco has been a client of the IFC since the mid-1980s. In 1988, the company set up a $46m Eurocommercial paper programme backed by the IFC.

The IFC said it expected its newly-merged securities and syndications unit to arrange more equity-linked transactions of this kind. Among the potential issuers are many of 136 Mexican companies privatised since President Carlos Salinas came to power in 1988.

Heyman elected SEC's market watchdog

MR WILLIAM H. Heyman, a former top Wall Street executive, has been appointed head of the Securities and Exchange Commission's Market Regulation Division, officials said, AP-DJ reports from New York.

Mr Heyman replaces Mr Richard Ketchum as top stock market watchdog for the SEC. He had joined the agency as Mr Ketchum's deputy in February. Before that, he was a managing director and head of arbitrage at Smith Barney, Harris Upham.

LONDON MARKET STATISTICS

FT-ACTUARIES SHARE INDICES

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	EQUITY GROUPS & SUB-SECTIONS (Figures in parentheses show number of stocks per section)	Monday May 20 1991 Index No.	Day's Change %	Est. Earnings Yield% (Max.)	Gross Div. Yield% (Act at (25%)	Est. P/E Ratio (Net)	xd adj. 1991 to date	Fri May 17 Index No.	Thu May 16 Index No.	Wed May 15 Index No.	Year ago (approx) Index No.
1	CAPITAL GOODS (186)	826.29	+0.2	11.32	5.88	10.84	15.76	824.48	831.36	827.68	867.52
2	Building Materials (24)	1082.91	......	10.67	5.73	11.52	22.01	1082.86	1100.37	1087.64	1078.44
3	Contracting, Construction (31)	1325.48	......	9.26	6.07	14.16	30.61	1324.76	1329.11	1314.97	1349.29
4	Electricals (10)	2359.74	+0.2	11.15	5.67	11.43	61.85	2355.37	2359.43	2340.50	2456.10
5	Electronics (25)	1748.76	+0.7	8.96	5.13	14.87	7.81	1736.59	1745.77	1746.88	1874.64
6	Engineering-Aerospace (8)	428.45	+0.1	16.29	5.85	7.39	10.60	428.09	434.77	433.98	462.70
7	Engineering-General (47)	435.73	......	12.93	6.03	9.35	8.43	435.89	436.87	437.82	467.16
8	Metals and Metal Forming (8)	447.84	−0.2	19.95	7.71	6.18	2.31	448.93	451.68	455.02	481.86
9	Motors (13)	322.27	+0.3	12.54	7.54	9.42	9.89	321.25	324.30	323.60	341.13
10	Other Industrial Materials (20)	1474.88	+0.4	9.61	5.51	12.24	31.84	1468.29	1479.66	1472.54	1588.52
21	CONSUMER GROUP (187)	1441.96	+0.2	8.33	3.76	14.79	18.58	1439.32	1443.52	1442.46	1256.89
22	Brewers and Distillers (22)	1797.16	+0.1	8.61	3.66	14.22	21.60	1795.90	1808.43	1799.09	1484.07
25	Food Manufacturing (20)	1153.26	+0.2	10.00	4.26	12.33	18.39	1150.65	1159.18	1154.29	1078.47
26	*Food Retailing (16)*	*2737.94*	*−0.5*	*8.12*	*3.02*	*16.11*	*30.32*	*2752.11*	*2733.76*	*2782.77*	*2391.96*
27	Health and Household (21)	3262.37	+1.3	5.89	2.63	19.40	29.05	3220.17	3200.34	3194.60	2597.71
29	Hotels and Leisure (23)	1311.50	......	10.33	5.27	11.42	23.57	1312.11	1314.94	1321.35	1403.42
30	Media (26)	1440.87	−0.1	9.50	4.84	13.42	22.11	1442.68	1454.74	1439.81	0.00
31	Packaging, Paper & Printing (16)	658.11	−0.1	8.23	5.01	15.21	11.81	658.59	666.26	659.60	571.91
34	Stores (33)	892.17	−0.6	9.00	4.08	14.49	12.50	897.86	908.82	908.03	777.08
35	Textiles (10)	532.72	−0.6	10.53	5.86	11.73	9.55	536.10	537.14	540.86	480.31
40	OTHER GROUPS (108)	1220.05	+0.6	9.67	4.98	12.70	11.16	1213.05	1222.42	1215.55	1139.35
41	Business Services (13)	1220.92	+0.7	10.90	5.33	11.28	13.23	1212.02	1216.05	1212.06	0.00
42	Chemicals (21)	1339.00	−1.1	8.61	5.34	13.37	28.71	1353.46	1373.52	1340.06	1242.30
43	Conglomerates (10)	1486.77	+0.2	10.26	6.98	11.76	17.49	1484.20	1510.30	1512.09	1611.55
44	Transport (14)	2190.93	−0.2	11.24	4.72	10.99	26.91	2196.27	2211.81	2191.66	2212.38
45	Electricity (14)	1212.91	+0.8	11.43	5.50	10.96	0.00	1202.87	1208.19	1193.97	0.00
46	Telephone Networks (4)	1452.45	+1.4	9.14	3.44	14.24	0.00	1432.52	1440.13	1439.00	1146.37
47	Water (10)	2445.95	−0.1	13.86	5.73	8.06	39.69	2448.83	2473.72	2444.40	1996.07
48	*Miscellaneous (22)*	*1872.93*	*+1.8*	*6.28*	*4.99*	*20.37*	*22.21*	*1840.35*	*1837.13*	*1851.23*	*1725.21*
49	INDUSTRIAL GROUP (481)	1223.05	+0.3	9.36	4.57	13.14	15.77	1219.17	1225.94	1222.20	1136.04
51	Oil & Gas (19)	2348.53	+1.0	10.72	5.67	12.15	50.59	2324.81	2340.48	2327.34	2263.27
59	500 SHARE INDEX (500)	1318.95	+0.4	9.53	4.71	13.00	18.51	1313.60	1321.09	1316.63	1230.45
61	FINANCIAL GROUP (97)	796.10	+0.1	–	5.95	–	18.07	795.33	806.22	797.01	783.27
62	Banks (9)	880.13	−0.2	7.86	6.29	18.45	22.63	881.61	898.20	887.52	834.50
65	Insurance (Life) (7)	1460.85	......	–	5.67	–	41.64	1461.37	1478.90	1460.16	1344.20
66	Insurance (Composite) (6)	672.41	+0.5	–	6.52	–	20.23	669.32	675.64	665.34	667.89
67	Insurance (Brokers) (8)	1082.36	+0.5	7.29	6.21	17.86	21.24	1076.92	1098.37	1080.52	1054.62
68	Merchant Banks (7)	426.26	......	–	4.75	–	4.47	426.48	429.77	423.36	432.50
69	Property (40)	982.38	+0.5	6.61	4.77	20.75	7.90	977.31	986.45	980.87	1070.57
70	Other Financial (20)	284.59	−0.2	9.25	6.35	13.43	4.75	285.27	286.30	285.60	304.55
71	Investment Trusts (70)	1203.50	+0.4	–	3.48	–	15.60	1198.71	1205.86	1205.08	1184.32
99	ALL-SHARE INDEX (667)	1192.35	+0.4	–	4.85	–	18.11	1188.02	1196.09	1190.82	1122.64

	Index No.	Day's Change	Day's High (a)	Day's Low (b)	May 17	May 16	May 15	May 14	May 13	Year ago
FT-SE 100 SHARE INDEX‡	2466.6	+12.7	2467.1	2452.9	2453.9	2471.9	2459.4	2463.7	2486.6	2282.1

FIXED INTEREST

	PRICE INDICES	Mon May 20	Day's change %	Fri May 17	Accrued interest	xd adj. 1991 to date
	British Government					
1	Up to 5 years (28)	121.20	+0.09	121.09	2.05	4.29
2	5-15 years (29)	130.28	+0.24	129.97	2.36	5.15
3	Over 15 years (8)	136.56	+0.30	136.16	1.94	5.02
4	Irredeemables (6)	148.97	+0.21	148.66	0.78	6.11
5	All stocks (70)	129.59	+0.19	129.34	2.23	4.92
	Index-Linked					
6	Up to 5 years (1)	158.83	......	158.82	0.05	2.72
7	Over 5 years (10)	146.85	+0.04	146.79	0.91	1.52
8	All stocks (11)	147.75	+0.04	147.69	0.88	1.56
9	Debs & Loans (56)	109.36	+0.10	110.09	1.96	4.30

	AVERAGE GROSS REDEMPTION YIELDS		Mon May 20	Fri May 17	Year ago (approx.)
	British Government				
1	Low	5 years	9.16	9.20	11.20
2	Coupons	15 years	9.80	9.84	10.80
3	(0%-7¾%)	20 years	9.95	9.99	10.69
4	Medium	5 years	10.38	10.41	12.14
5	Coupons	15 years	10.26	10.29	11.31
6	(8%-10¾%)	20 years	10.18	10.22	10.91
7	High	5 years	10.55	10.59	12.27
8	Coupons	15 years	10.42	10.46	11.59
9	(11%-)	20 years	10.31	10.35	11.19
10	Irredeemables†		10.22	10.24	10.71
	Index-Linked				
11	Inflation rate 5%	Up to 5yrs.	4.12	4.11	5.15
12	Inflation rate 5%	Over 5 yrs.	4.23	4.23	4.12
13	Inflation rate 10%	Up to 5 yrs.	3.19	3.18	4.06
14	Inflation rate 10%	Over 5 yrs.	4.03	4.03	3.94
15	Debs &	5 years	11.87	11.87	14.80
16	Loans	15 years	11.65	11.64	13.48
17		25 years	11.45	11.45	13.08

‡Opening index 2453.0; 9 am 2460.0; 10 am 2459.2; 11 am 2462.8; Noon 2464.3; 1 pm 2463.8; 2 pm 2462.8; 2.30 pm 2458.9; 3 pm 2456.7; 4.10 pm 2466.9; (a) 4.18pm (b) 8.31am †Flat yield. Highs and lows record, base dates, values and constituent changes are published in Saturday issues. A list of constituents is available from the Publishers, The Financial Times, Number One, Southwark Bridge, London SE1 9HL. The FT-ACTUARIES SHARE INDICES SERVICE includes details of the information used in the construction of these indices. These are available by subscription from FINSTAT, 071-925 2323. CONSTITUENT CHANGES: Tootal (35) has been deleted and replaced by Mirror Group Newspapers (30).

RISES AND FALLS YESTERDAY

	Rises	Falls	Same
British Funds	71	1	12
Corporations, Dominion and Foreign Bonds	7	0	13
Industrials	343	278	908
Financial and Properties	156	89	495
Oils	32	12	49
Plantations	4	0	6
Mines	58	25	80
Others	89	20	59
Totals	760	425	1,622

LONDON RECENT ISSUES

EQUITIES

[illegible]

FIXED INTEREST STOCKS

[illegible]

RIGHTS OFFERS

[illegible]

TRADITIONAL OPTIONS

● First Dealings May 7
● Last Dealings May 24
● Last Declarations August 8
● For settlement August 19

For rate indications see end of London Share Service

Calls in Brent Walker Ord. & Pref. shares, Control Secs., Dewhirst, Erskine House, Microvitec, Mirror Group, Oliver Res., Premier Cons., Sutcliffe Speakman and Thames TV. Put in Egerton Trust. Put and call in TVS.

LONDON TRADED OPTIONS

[illegible]

UK COMPANY NEWS

Survival depends upon successful outcome to refinancing talks

Brent Walker to put plan to banks

By Maggie Urry

THE ENORMITY of the task facing Brent Walker and its bankers became clearer yesterday with the publication of results for 1990 and a year-end balance sheet.

Net assets had dwindled to £139m, and the notes to the accounts suggest that even this would disappear if the group's properties were sold in a disorderly fashion.

The company said that its ability to operate as a going concern was dependent upon successful talks with its banks and "the continued provision of adequate short-term finance by the group's bankers until the financial restructuring has been agreed".

Brent Walker is putting its business plan to the steering committee of its 60 or so banks today. The committee, headed by Standard Chartered Bank, will consider the plan and if it decides to accept it will put it to the other lenders.

The balance sheet showed Brent Walker owed its banks a net £1.2bn at the end of December. However, this has risen since as the group's trading profits have not covered interest charges. The banks must decide whether to let Brent Walker make a £6.6m interest payment on Thursday due on its £101.9m of convertible bonds. The bondholders rank below the banks in the hierarchy of creditors.

The leisure group, of which Mr George Walker is chief executive and largest shareholder, turned in a rise in operating profits for 1990, to £122.2m (£112.9m). However, the gain was greater at the interim stage when operating profits were reported at £93.1m against £48.1m.

A large part of the increase came from the purchase of the William Hill betting shop chain in December 1989. This contributed for only a couple of weeks in the 1989 figures. Operating profits from betting in 1990 were £57.1m (£5.8m).

All the divisions increased operating profits. Hotels, leisure and related activities made £15.1m (£13.6m); brewing, wines and spirits contributed £20m (£18.4m) and leisure developments made £34.8m (£22.9m). There were no property profits compared to a £30.3m gain in 1989. Profits from businesses sold were £3.4m (£27m).

The group's problems stem from its high level of debt and the fall in the property market. Its gross interest charge was £195m (£82.2m) but was cut to a net figure of £116.2m (£44.1m) by capitalising some interest and including other amounts under exceptional and extraordinary items.

Exceptional items included £14m of costs relating to the group's refinancing last November, with another £24.1m written off against investment and development properties. The company has also written off £15.9m of advance corporation tax.

Below the line, extraordinary debits of £201.7m (credits of £52.5m) related to the write down of properties which are due to be sold and losses taken on sales completed. These included a £115.1m loss against the group's media interests and £73.5m against hotels, leisure and related activities. The extraordinary costs included £3.7m related to the £101.9m convertible bond issue last November.

The balance sheet includes as debt the £50m owed to Grand Metropolitan as the final instalment of the £685m purchase of the William Hill chain. Brent Walker is still disputing the purchase price, which it thinks should have been £213m lower.

See Lex

Recession-hit Prowting more than halved at £7.5m

By Andrew Bolger

PROWTING, the Middlesex-based housebuilder which concentrates on the south-east of England, blamed the industry's unprecedented recession for a "disappointing" drop in pre-tax profits from £16.1m to £7.5m in the year to February 28.

The number of houses sold fell only slightly from 307 to 296, with the average selling price down from £141,000 to £120,000. This reduction resulted from lower prices and a change in the group's mix towards smaller, higher-density houses.

Prowting said: "We have a continuing policy of trying to maximise margins rather than sales volumes in order to reap the best advantage from our valuable land bank."

Turnover fell 35 per cent to £40.8m (£62.9m), reflecting not only the lower prices, but also a reduction in the amount of surplus, undeveloped land sold.

Earnings per share fell from 16.9p to to 6.9p. A final dividend of 3.3p maintains the total at 5p.

Prowting said that at the year-end it controlled some 5,500 plots with planning permission or zoned for residential use, an increase of 100 plots since the previous year. The forward land bank, on which the company hopes to obtain permission, stood at 3,500 potential plots.

Mr Terry Rowdon, chief executive, said: "There is light at the end of the tunnel, although much will depend on the timing and the pace of recovery in the UK housing market."

● COMMENT

Prowting's focus on the south-east means it felt the full force of the recession, but the family-controlled company has also benefited from hopes that lower interest rates will enable housebuilding to bounce back. Volumes will no doubt improve, but results will be restrained in the short term by continuing pressure on margins and the group's move towards cheaper houses. The company is favoured by institutions because of its land bank, probably the best in the business. The catch is that this quality and the group's strong medium-term prospects are now more than reflected in the price of the tightly-traded shares. Forecasts of a modest £8.5m pre-tax puts the shares, down 5p yesterday to 178p, on a hefty prospective multiple of 22. There are cheaper ways of betting on an end to housing market gloom.

Ferromet joins dividend list despite 55% decline

By Roland Rudd

FERROMET GROUP, a supplier of raw materials from the US to the stainless steel industry in Europe and south east Asia, is to pay a maiden dividend despite a 55 per cent drop in taxable profits for 1990.

The USM-quoted company blamed the recession on both sides of the Atlantic for the drop from £1.38m to £624,318 in pre-tax profits. Turnover fell by some 27 per cent to £48.29m. The comparative figures covered a nine-month period.

Mr Roger Wain, chairman, said the group was also affected by the weak dollar and the Gulf war. "During the last quarter business between the US and Korea came to a grinding halt" he added.

Despite the disappointing result the group is to pay a dividend, a nominal 0.05p, for the first time in its seven year history.

Mr Wain said he had promised shareholders last year that the company intended to pay a dividend. He hopes to pay a bigger dividend by the end of the current year.

The group changed its name from Clogau Gold in 1989 when it acquired Ferromet Resources, the US scrap metal company. The American business was recently strengthened with the acquisition of a deep water facility in Alabama.

A joint venture with Westgold, part of the Minorco Group, is studying whether it is financially feasible to mine a geological reserve of 5.5m tonnes at 0.0338 gold per tonne.

Borrowings have risen from £12m to £18m. Mr Wain said the increase was due to the cyclical nature of the trading business.

The dividend is covered 3.4 times by earnings per share of 0.17p (0.57p).

● COMMENT

Shareholders expect dividends. So last year Mr Wain told them what they wanted to hear: Ferromet would be paying its first dividend when it reported its 1990 year end results. Nothing wrong in that. The only problem was that the promise was made before the fall in the value of the dollar, and more importantly the start of the Gulf war. But a promise is a promise and so the group decided to pay out a nominal dividend and hopes to increase the distribution by the end of the current year. But this time the chairman is wisely refraining from promising anything. The market expects a slight increase in profits, putting the shares on a prospective multiple of 10. Investors looking for a substantial dividend are likely to be disappointed.

Midland not to sell its Thos Cook travel chain

By David Churchill, Leisure Industries Correspondent

THOMAS COOK, the travel agency owned by Midland Bank has told its 1,200 staff that it is no longer up for sale.

Mr John Donaldson, Cook's chief executive, has written to the 1,200 staff saying that Midland has decided not to sell the travel chain.

The move follows months of speculation that Cook it would be sold to ease Midland's financial problems. The bank cut its dividend in February after announcing pre-tax profits of only £11m for 1990 and has attempted disposals of several subsidiaries, including Forward Trust, its finance house.

Thomas Cook, one of the group's strongest performers, was not formally placed on the market but Midland is understood to have received several firm offers but none that met its asking price.

The decision appears to have been taken by Mr Brian Pearse, the new chief executive who arrived from Barclays in the wake of the announcement of Midland's 1990 results.

In 1990 Cook's pre-tax profits were £28m on turnover of £370m. It has 334 shops in the UK and 1,500 in Europe.

Disposal to cut debt at Systems Reliability

By Roland Rudd

Systems Reliability Holdings, the computer systems manufacturer and telephone systems designer, yesterday announced a £12m management buy-out of its telecommunications and information technology businesses.

The group also reported a fall in pre-tax profits from £7.86m to £7.58m for the year to end-December. Turnover was up from £134.58m to £183.15m.

The sale will strengthen the holding company's balance sheet by reducing its £12m debt by £8.5m. The group is to focus on its core activities.

The recommended final dividend of 1.5p raises the total to 2.5p (2.25p). It is covered almost three times by earnings per share of 7.4p (12.76p).

Sedgwick first quarter static at £42.6m despite cost cuts

By Clare Pearson

SEDGWICK, the international insurance group which enforced swingeing cost cuts last year, has announced static profits for the first quarter.

The pre-tax figure for the three months to the end of March came out at £42.6m against £42.5m last year.

This result came after Sedgwick had already reported sharply lower pre-tax profits of £69.3m for the full year after £21.4m exceptional charges for redundancies and closures, especially in the US.

Commenting on the first three months, Mr David Rowland, chairman, warned that insurance markets were continuing to be soft.

However, he pointed to a two per cent reduction in expenses at constant exchange rates in the first quarter. This, he said, was evidence of the benefits of Sedgwick's long-term cost-cutting programme coming through.

He said that last year's heavy cuts in its US operations allowed Sedgwick James, the international retail business, to show an improvement in trading on last year during the first quarter.

Mr Rowland added that the current strength of the dollar was an encouraging factor. With some 60 per cent of revenues in dollars, the weakness in the US unit against sterling during the first quarter, compared with the comparable 1990 period, had had a significant adverse impact.

Without taking into account exchange rate changes, revenues for the quarter were £183.3m (£197.3m) and expenses £138.9m (£152.1m). Operating income provided £169.2m (£179.8m) of revenues and interest and investment income £14m (£17.5m).

Sedgwick Broking Services was beginning to benefit from an "initial hardening" in some parts of the marine market. Meanwhile, premium rates for standard risk in North American and most other insurance markets had not increased, although in London increases had occurred in certain specialised areas.

Earnings per share for the first quarter worked through at 6.6p (6.4p).

Robert Maxwell attacked over Central & Sheerwood deals

By Michiyo Nakamoto

MR ROBERT Maxwell, the media magnate, became the target of criticism from shareholders in Central & Sheerwood, the engineering and property group of which he is chairman, when he failed to appear at both its AGM and subsequent EGM yesterday.

The EGM had been called to agree restructuring proposals for the group, including the acquisition of two companies controlled by Mr Maxwell, who owns a 20.7 per cent stake in C&S.

Shareholders criticised the absence of Mr Maxwell and his son Kevin, both of whom are directors of the company, to explain the conditions of the acquisitions announced last month.

"I think it shows remarkable disrespect," said one upset shareholder, while another left the room saying "this is a farce."

Mr Dick Rimington, deputy chairman, explained that Mr Maxwell was extremely busy.

The acquisition deals call for C&S to acquire Lock, which designs, assembles and sells electronic metal detection equipment, and Petroleum Seals & Systems, a manufacturer of industrial rubber products and seals which are subsidiaries of Headington Investments, of which Mr Maxwell is chairman.

It is also acquiring Transfer Technology, an electronics group, founded and owned by Mr Geoffrey Robinson, another director of C&S, who also has an operational interest in PSS and its subsidiaries.

The acquisitions are to be made for a total cash consideration of £1.75m and the issue of 271.2m shares at 3p per share. The shares closed at 4¾p yesterday.

The deal increases Mr Maxwell's stake in the enlarged group from 20.7 per cent to 27.2 per cent. Mr Robinson, who will acquire 28.1 per cent in C&S as a result of the deal, is replacing Mr Maxwell as chief executive.

Meanwhile, Robert Fraser Group, the merchant bank, is to dispose of its 98.27m shares in C&S, or approximately 28 per cent, following the decision by C&S to cease its property activities. These shares are being placed with institutional investors, also at 3p each.

Independent shareholders are angry that the shares in the company are being issued to companies controlled by Mr Maxwell and Mr Robinson and placed with institutions at lower than their market price, while independent shareholders are not able to buy at that low price.

"It's a bloody carve up," exclaimed Mr Peter Adams, a shareholder. He has been trying to buy shares in C&S since the beginning of the year at 3¼p and has not been able to buy any at that price.

"We don't mind you helping yourselves to a large share of the cake, but when there is icing on the cake, leave us our fair share," he said.

Mr Adams's proposal for a rights issue which would enable independent shareholders to also benefit from the issue of new shares at an attractive price, was, however, rejected and all the resolutions put to the meeting were eventually passed, including a change of name to Transfer Technology Group.

Goldsmiths dives sharply to £2m

GOLDSMITHS GROUP, the jewellery chain, reported a sharp fall in pre-tax profits from £4.06m to £1.9m in its first year as a public company, writes John Thornhill.

The recession, poll tax and the high level of interest rates were held to blame. In the 12 months to March 2, sales grew from £39.58m to £41.46m but higher costs reduced operating profits to £4.75m (£6.92m).

Mr Jurek Piasecki, chairman and chief executive, said the tough trading conditions began to have an adverse impact on the business from June onwards and coincided with some big price increases from its watch suppliers.

A final dividend of 1.5p will bring the total maiden dividend to 3p.

● COMMENT

Goldsmiths Group has had a rough ride since it returned to the market via an offer for sale a little more than a year ago. The high street recession has deepened since then and the company's share price has consistently headed south from its original flotation price of 150p. The company is taking a bleak view of current trading prospects – rightly so in the light of yesterday's dispiriting retail sales figures from the Central Statistical Office – and there seems little hope of an early recovery in the shares either. This year, Goldsmiths will do well to maintain profits at last year's level; the weaker trading should be offset by the company's strenuous efforts to cut costs; but earnings will improve marginally due to a improved tax position giving a prospective multiple of 8. The shares are underpinned by a reasonable dividend yield and have little further downside. They are unlikely, however, to move ahead greatly from yesterday's closing price of 50p until there is a rosier glow on the high street.

DIVIDENDS ANNOUNCED

		Current payment	Date of payment	Corres - ponding dividend	Total for year	Total last year
Assoc Brit Foods	fin	8.5‡	Sept 2	7.7	12.2	11
Brent Walker	fin	nil	-	10	5	15
Ferromet §	fin	0.05	June 28	-	0.05	-
Goldsmiths	fin	1.5	Sept 2	1.4	3	1.4
Halls Homes §	fin	nil	-	4	1	6
Prowting	fin	3.3	-	3.3	5	5
Systems Reliabty	fin	1.5†	July 22	1.5	2.5	2.25
Tharsis	fin	3	June 27	9.5	6	12.5

Dividends shown pence per share net except where otherwise stated. *Equivalent after allowing for scrip issue. †On capital increased by rights and/or acquisition issues. §USM stock. ‡Second interim for 18-month period to September 14.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether the dividends are interims or finals and the subdivisions shown below are based mainly on last year's timetables.

TODAY

Interims- Archimedes Inv Trust, Compass, Fairline Boats, New Zealand Inv Trust, Tunstall, Yorkshire Television, Young (H).

Finals- British Airways, British American Film, Cosmo, Cook (William), Readicut Intl.

FUTURE DATES

Interims-

Bilck	June 4
Morland	May 22
Shaftesbury	May 23

Finals-

Chesterfield Props	May 22
Crossroads Oil	June 5
Indonesia Equity Fund	June 3
Mercury Asset Management	May 29
Salvesen (Christian)	June 13
Unigate	June 10

UK COMPANY NEWS

Andrew Taylor and **Charles Leadbeater** on the political reaction to Hansōn's stake in ICI while **Diane Summers** gives the unions' views

MPs unite in opposition to possible bid

LABOUR AND Conservative MPs with Imperial Chemical Industries plants in their constituencies yesterday warned that a bid for the company by Hanson, the acquisitive conglomerate, would face mounting political opposition.

The response confirms that the government would face considerable pressure from its own supporters to make sure ICI was not broken up by Hanson, which last week acquired a 2.8 per cent stake.

As the map, right, shows, the spread of ICI's involvement in the UK economy gives it a considerable political significance.

The company has a UK workforce of 53,000 employed at more than 70 sites throughout the country, 32 of which employ 200 or more people. Its activities directly affect more than 40 Parliamentary constituencies, some of them Conservative marginals.

In the next few weeks much could turn on how the two companies marshall their political resources.

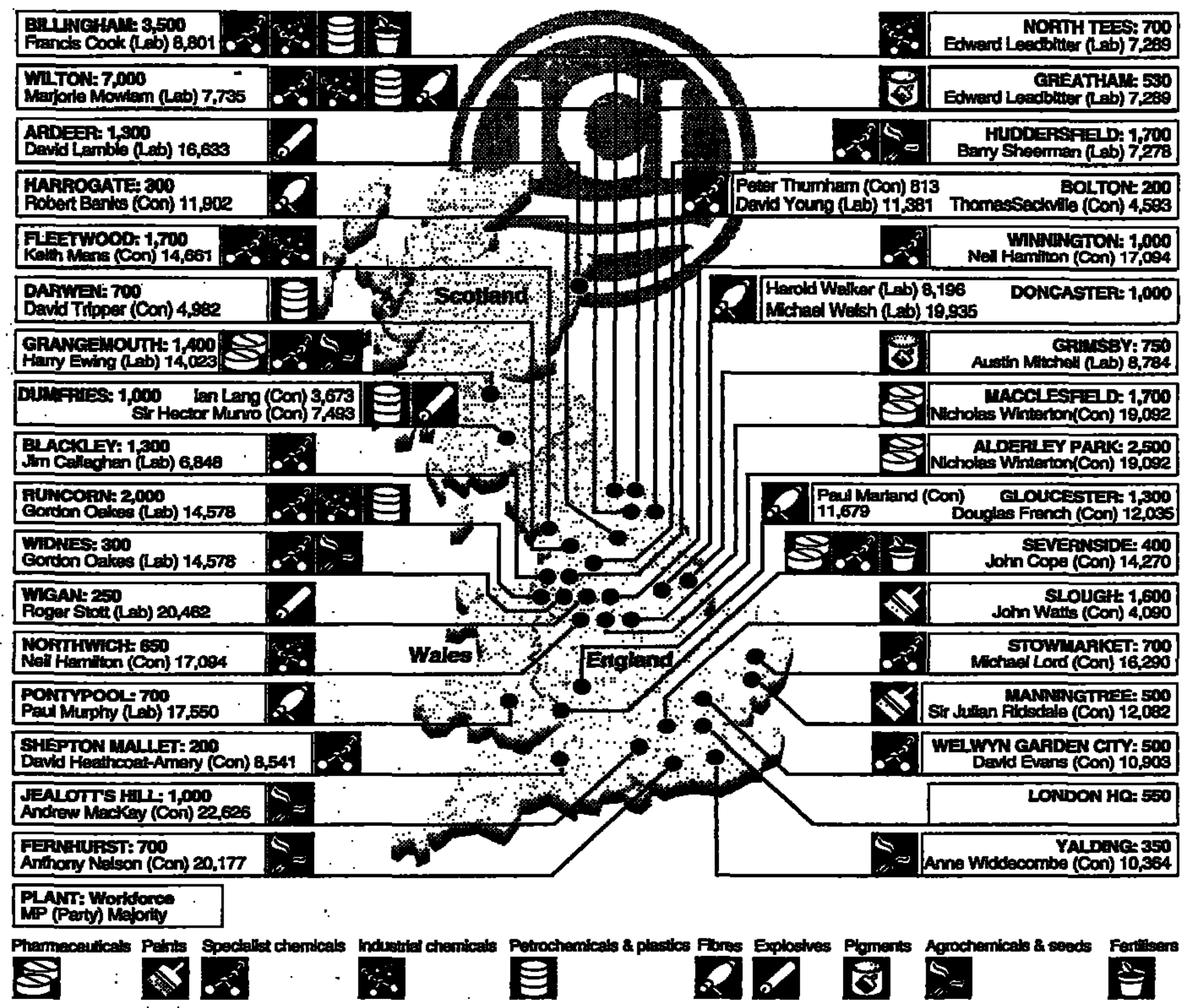
Mr Nicholas Winterton, Conservative MP for Macclesfield where ICI employs about 1,700 people said: "I am absolutely appalled at the prospect of a bid for ICI. I cannot see that Hanson can do anything for ICI that ICI could not do for itself."

He added: "If a bid is made I will put pressure on my party and ministers to ensure it does not succeed."

Mr Douglas French, Conservative MP for Gloucester, who represents 90 per cent of the workers at ICI's plant in the city, said: "I view with some misgivings the possibility of control passing to Lord Hanson because, brilliant though he is, I do not think that his greatest abilities lie in the sustained management and progress of a company of ICI's type."

Dr Marjorie Mowlam, opposition spokesman on city and corporate affairs and MP for Redcar commented: "A bid by Hanson would be opposed by the people of Teesside on several levels. While some might criticise ICI on environmental grounds, Hanson's record is much worse and investment, particularly in research and development would suffer."

Mr Harry Ewing, Labour MP for Falkirk, whose constituency includes ICI's Grangemouth complex said: "I am horrified at the thought of a takeover. ICI is a well managed company, with good industrial relations. All that would be put at risk with a bid. The government could not stand by and see a national institution endangered."



Unions warn of fight on a scale never seen before

TRADE UNIONS at Imperial Chemical Industries yesterday launched what they claimed would be a campaign "on a scale never seen before" as a pre-emptive move to influence public opinion against any bid for the company from Hanson.

The first stage of the campaign will be to press the Office of Fair Trading for an investigation on the basis that a Hanson takeover would allegedly be against the public interest.

In addition the European Commission will be asked to start immediate investigations. The unions also threatened to exert any pressure they could through pension fund investors in the company.

Mr Fred Higgs, secretary of the union side representing 22,000 process and craft workers said: "We're confident that if Hanson decides to go ahead with a full-blown takeover he's going to discover he's bitten off more than he can chew."

The six unions – the TGWU and GMB general unions, AEU engineering union, EETPU electricians union, MSF general technical union and the construction union Ucatt – had a brief meeting with ICI management today to inform them of the campaign. The company said it would "watch with interest".

Any possible takeover would be detrimental to the unions' members, the company and the long-term future of the whole company, said Mr Higgs. "It is our view that Hanson is a vandal of British industry," he added.

The unions feared that the component parts of the company would be sold for a quick return on Hanson's investment. There were particular fears for the pension fund. "On two occasions court action has had to be taken to prevent Hanson taking surpluses out of pension funds," said Mr Higgs.

The ICI unions were yesterday due to meet representatives of other unions at the Trades Union Congress to discuss the issue. An early meeting is also being sought with Labour's front bench trade and industry team.

In a further move the unions intend contacting members of the European Parliament and local councils, in which the company's plants, numbering more than 70, are situated.

● Separately, blue collar unions yesterday indicated that they were likely to reject a 6.4 per cent pay offer from the company. The increase, which would take effect from June 1, would be in addition to a 14 per cent rise and a cut in the working week at present on offer in exchange for an improvement in working practices.

Boddington questions Devenish asset value

By Philip Rawstorne

BODDINGTON, the pubs, hotels and health-care group, yesterday pursued its takeover bid for JA Devenish by claiming the west country brewer had significantly overvalued its assets.

Mr Denis Cassidy, Boddington's chairman, said in a letter to Devenish shareholders that the company's fully diluted net assets amounted to little more than 200p per share.

A review of Devenish's pub estate by a firm of chartered surveyors suggested that it was worth £20m less than the reported net book value of £147m, he said.

A book value of £19.5m for the loss-making Redruth brewery, which might have to be closed, was also questionable.

Devenish said in its defence document earlier this month that its net asset value was 272p per share.

Boddington's 10-for-7 share exchange offer values Devenish at 214p per share. There is a cash alternative of 210p.

Mr Cassidy, whose letter also attacked Devenish's "dismal profit record and prospects", yesterday questioned the credibility of any forecast for 1991 that the company might include in information it has promised shareholders.

"Devenish's dependence on the summer holiday trade would make it not so much a profit forecast as a weather forecast" he added.

Mr Michael Cannon, chairman and chief executive of Devenish, said yesterday that Boddington's views were "totally lacking in merit".

He added that Mr Cassidy's letter was "full of conjecture and supposition" and reflected Boddington's fear that it would not be able to afford the price necessary to gain control of Devenish.

UK COMPANY NEWS

Takeover interest in a resilient offshoot

John Murray Brown ponders the future of Vestel, a thriving Polly Peck company

THE MOURNING period is over, says Mr Tahsin Karan, head of Vestel, the Turkish consumer electronics subsidiary of Polly Peck International.

As PPI's creditors meet on Friday in London to decide the fate of the UK fruit to electronics group, Mr Karan may well ponder on what might have been. Today, seven months after financial difficulties forced PPI's chairman, Mr Asil Nadir, to seek UK court appointed administrators, Vestel is almost thriving.

To underline the point in February, Vestel reported a fourfold boost in pre-tax profits for 1990 to TL167bn (£36m). According to figures in the administrators' report the Vestel group made a trading profit of TL241bn (£52m) in 1990.

The company, reconfirming its reputation as one of PPI's more resilient subsidiaries, negotiated suppliers' credits with Goldstar, its South Korean joint venture partner. It has even won financial backing from some of the very same banks which refused new credits to PPI.

"What was important for the creditors was that the administrators explained they were behind the management," says Mr Karan.

Loath as they were to admit it, Vestel's success provides an object lesson for its rivals – how a foreign investor new to the field can shake up a well established industry and secure almost 20 per cent of the local market together with the largest share of exports.

When Vestel started production in 1985 there were just two makers of consumer electronics in Turkey – Profilo, which has the Sony license, and Koc's Arcelik, which makes Hitachi and Toshiba.

Terry Kirk

Vestel's factory at Manisa where some 30 different brand names are produced

With its eyes on the export market, Vestel rejected the usual "licensed manufacture" route to industrialisation. Instead, after a two-year link with Thorn EMI, Vestel established its own brand name by buying components from the Far East and assembling in Turkey.

"In our industry nothing is sacred," says Mr Karan. "We have no research and development. We buy integrated circuits. This is 60 per cent of the technology. The rest is just engineering skills."

Vestel is currently the second largest producer of colour televisions, with 14 per cent of the local market and 29 per cent of exports. It assembles both audio and video products, and has a complete range of white goods including refrigerators, washing machines and micro wave ovens.

The factory at Manisa, near Izmir, produces some 30 different brand names, made to the design and specification of a foreign purchaser — an arrangement known as original equipment manufacturing (OEM).

Buyers include many big international manufacturers such as IBM, Toshiba and Philips and UK retailers such as Dixons and Currys. In 1990 exports reached $90m, accounting for 60 per cent of Vestel's production.

"When you look at the Far East it takes them a month a ship. We can deliver to the retailers in four or five days," says Mr Karan.

The political climate was right, with Mr Turgut Ozal the then prime minister, introducing sweeping changes in the trade regime in an effort to force new efficiencies in Turkish industry.

Vestel was also ruthless in head hunting local expertise – which in part explains the legacy of mutual bitterness in the industry. Mr Karan was formerly a general manager at Profilo.

On the financial side, Vestel was able to rely on letters of credit issued by PPI for much of its raw material supplies, an important advantage when you consider that domestic borrowing was costing 100 per cent.

Furthermore, Vestel's 4,500 strong workforce is not unionised, another key factor at time of growing labour unrest in Turkey.

Some doubts remain. On the Istanbul stock exchange, where Vestel listed 18 per cent of its stock last June, the shares currently languish at around TL7,800 compared with the issue price of TL13,250.

One reason for this is that many brokers anticipate that the administrators will try to sell many more Vestel shares as part of the restructuring of the group.

Analysts also believe that Vestel may suffer substantial foreign exchange losses this year. Much of the company's input costs are in foreign currencies while its sales earn Turkish lira. The situation could be exacerbated this year with the TL devaluing by more than 30 per cent against the dollar in the first four months of 1991.

Mr Nadir used his local newspapers to market Vestel's products as one way to absorb some of the promotion costs.

Whatever questions hang over Vestel, there is no shortage of takeover interest despite Mr Karan's assertions that Vestel will remain part of the PPI core group.

For local groups like Cukurova and Sabanci, Vestel would provide a ready made entry into electronic manufacturing.

For competitors like Koc and Profilo, Vestel represents a chance to increase market share and buy brands.

Koc, Turkey's leading trading house, is understood to have expressed an interest in Vestel's picture tube investment venture with Thompson CSF, the French electronic concern.

Thompson has been mentioned as a possible buyer of Vestel. As one UK fund manager put it: "I think all the big conglomerates will be interested. It's such a cash cow."

NEWS DIGEST

Thorn in talks with Japanese

THORN EMI is discussing the possible sale of its light sensing and light amplification devices business to Hamamatsu Photonics of Japan.

Thorn, activities include recorded music, rentals and lighting, said it was also talking to Hamamatsu about other forms of collaboration.

The business concerned, Thorn EMI Electron Tubes, employs 220 people and turned in sales of about £7m in 1989-90.

It is based in Ruislip, Middlesex, with a small marketing unit in New Jersey. Its products are used for scientific and medical purposes.

Godfrey Davis sells Ford dealerships

Godfrey Davis (Holdings), the textiles, car dealing and building services group, has conditionally agreed to sell three of its four Ford dealerships to Godfrey Davis (Trust), a new company owned by directors of the dealerships.

The sale price of £6.69m includes an immediate dividend payment of £1.14m to Godfrey Davis, with the balance payable on completion.

Total proceeds of the sale will result in an extraordinary loss on disposal of about £1.3m, which will be included in Godfrey Davis's interim figures for the six months to end-June.

Following the disposal, Godfrey Davis's interests in the motor distribution sector will comprise a single Ford dealership at St Albans together with property assets still rented out to Trust.

The proceeds will be used to fund further expansion of the group, which is proposing to change its name to Davis Service Group at its forthcoming AGM.

Exchange rate losses put Tharsis into red

The Tharsis Company, a Glasgow-based group which is mainly involved in land development in Spain, incurred a deficit of £153,076 in 1990. The total dividend is more than halved.

The outcome – achieved on turnover of just £370,420 (£2.29m) – compared with taxable profits of £1.62m in the previous year and was struck after exchange rate losses amounting to £275,857 (profit of £427,112).

The position was also affected by the group's share of losses at its Filon Sur gold mining associate which amounted to £383,065 reflecting a low metal price and the weak dollar.

Following a restructuring, its share of the company increased from about 27 per cent to 48.6 per cent. The investment was expected to contribute to profits within a few years according to Mr Frederic Velge, chairman.

The company's original core activity – the sale outside Spain of pyrites – was expected to cease in the current year.

Earnings per share slumped from 44.99p to 3.23p and a proposed final dividend of 3p brings the total to 6p (12.5p).

Losses deepen at Youghal

Losses deepened in 1990 at Youghal Carpets (Holdings) from I£1.26m to I£2.84m (£2.55m). There was an operating loss this time of I£255,000 compared with profits of I£802,000.

Interest charges at this County Cork-based company rose to I£2.18m (I£1.88m). In addition, exceptional items increased from I£184,000 to I£401,000, relating to reorganisation costs of its UK plants.

Turnover fell 17 per cent to I£55.23m (I£66.44m). Losses per share came out at 6.09p (2.85p).

Rosehaugh holding rebuilt

Funds managed by Robert Fleming have rebuilt their stake in Rosehaugh, the property company headed by Mr Godfrey Bradman, to 13.18 per cent.

Before Rosehaugh's rights issue in February 1990, Fleming-managed funds held about 12 per cent. The holding was reduced to 4 per cent in September, since when it has gradually increased.

One of the funds is Unilever's Superannuation Fund, which has notified Rosehaugh that it has a holding of 3.13 per cent.

Rosehaugh's shares rose 2p to 59p yesterday, after having fallen from 220p during the past year.

Powell Duffryn £5m Dresser purchase

Hamworthy Engineering, the Dorset-based subsidiary of Powell Duffryn, has bought the combustion operation of Dresser Holmes from Dresser Industries of Dallas for £5m.

Dresser Holmes' plants in Kent and the West Midlands will strengthen Hamworthy's existing combustion systems business and improve penetration of the expanding large-scale incinerator and process industry markets.

The two businesses will have a combined turnover of £24m.

CHAIRMAN'S STATEMENT

Despite the intense competition in 1990, and through a firm internal policy of 'good housekeeping', Mr Jon Foulds, Chairman of Halifax Building Society, was able to announce exceptional results for the year in his first annual statement.

"IN A FIERCELY COMPETITIVE WORLD, ONLY THE BEST WILL SURVIVE AND PROSPER."

- Pre-tax profits up by 11% to £593 million.
- Cost/income ratio improved from 51.4% to 48.5%.
- Assets grow to £54,000 million.
- Gross lending of £9,600 million to 211,000 borrowers.
- Market share of lending sustained at 17%.
- Savings and investment balances up by £5,600 million.

"It is," said Mr Foulds "my firm belief that the quality of Halifax assets, our capital strength, profitability and efficient management place us among the leading European financial institutions."

Everything about the Halifax is substantial, both its achievements and its ambitions.

Yet it is the constant principle of the organisation that all the success to date will only continue if customer needs are met with excellent products and an exceptionally good service.

Good housekeeping, consolidating and preserving asset quality, enhancing service and controlling costs have not deflected the Society from its steady programme of introducing new products and services.

During 1990, the broad range of mortgage schemes was widened to encompass special offers for first time buyers, larger borrowers and those looking for a fixed rate mortgage, whilst prudent lending policies ensured that borrowers were not allowed to over-commit themselves.

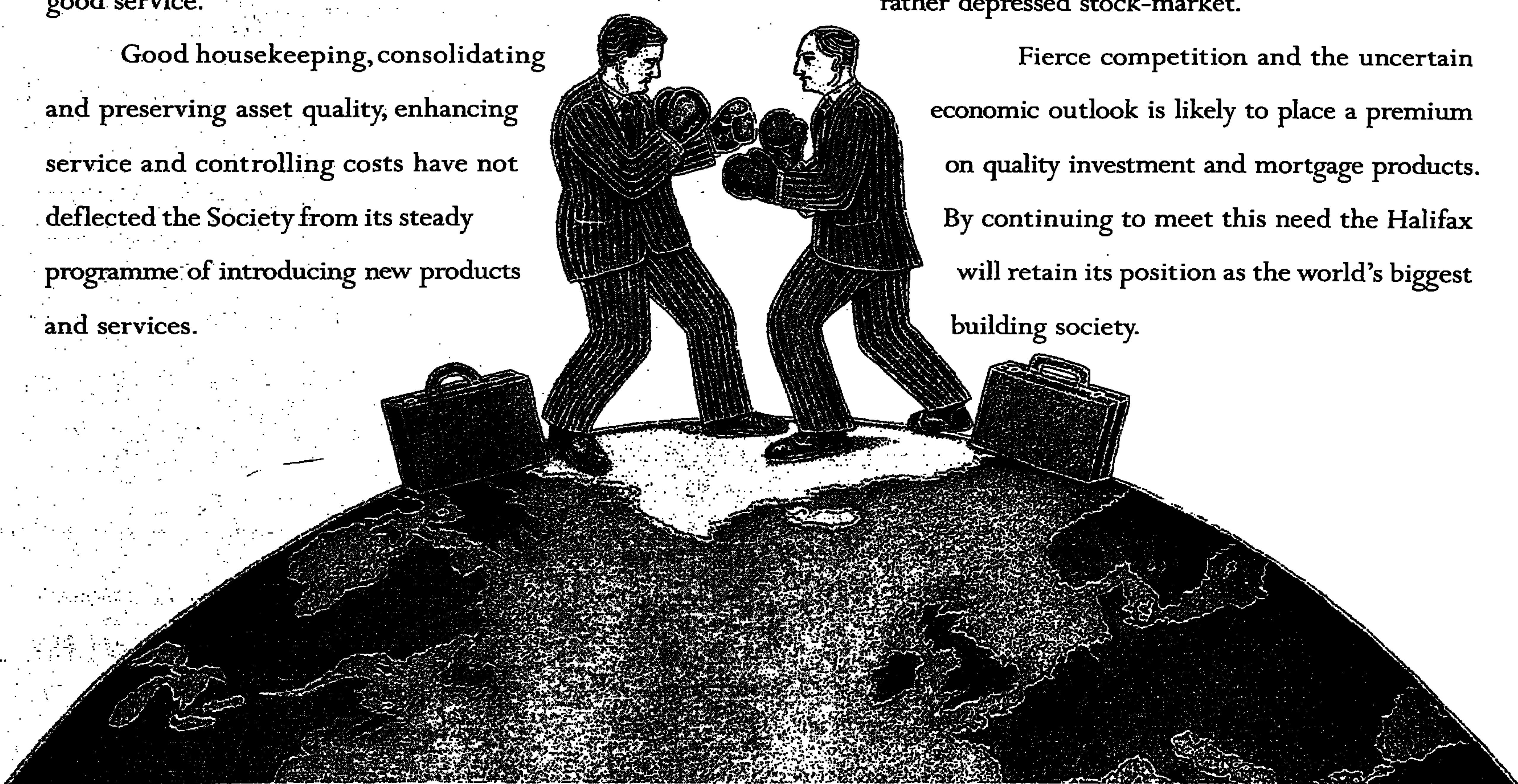
New saving schemes were added to the traditional portfolio of Instant Xtra and 90 Day Xtra. These included a one year bond – Capital Xtra and a high return investment–Time Deposits.

Following the 1990 Budget encouragement for savers, the Halifax introduced a TESSA scheme which has proved spectacularly successful with currently over 350,000 customers and almost £1,000 million invested.

The appeal of Maxim, the Society's current account, continued to grow, and now 350,000 customers have the additional benefit of the Switch facility.

Halifax Standard Life, a joint venture unit trust company, was formed to offer a range of personal equity plans and unit trusts, the first of which, Global Advantage, made an encouraging start despite the background of a rather depressed stock-market.

Fierce competition and the uncertain economic outlook is likely to place a premium on quality investment and mortgage products. By continuing to meet this need the Halifax will retain its position as the world's biggest building society.



HALIFAX

HALIFAX BUILDING SOCIETY, TRINITY ROAD, HALIFAX, WEST YORKSHIRE HX1 2RG.

COMMODITIES AND AGRICULTURE

Food export loans might cost US Treasury $6.7bn

By Nancy Dunne

THE US Treasury may have to pay as much as $6.7bn (£3.9bn) for delinquencies on loans backed by the US Agriculture Department to boost food exports, a government report said.

The General Accounting Office, the investigative arm of Congress, said the cost of the government's export credit guarantee programme might soar because the USDA has been forced by law to hand out billions of dollars in guarantees to high risk countries like Iraq. The countries which received these guarantees are even less likely to meet their obligations than poorer countries which get soft loans for food aid.

The GAO report has become a factor in the debate over the Soviet request for $1.5bn in new guarantees. President Bush has said he wants to extend the guarantees but he is being restrained by creditworthiness requirements written into last year's farm bill.

The investigators noted that Moscow's credit rating by international banks has deteriorated rapidly in the past year, showing the second greatest one-year decline for a country in the past decade.

The report estimated that of the $11.2bn in guarantees and delinquent or rescheduled payments outstanding last May, the treasury might have to pay out 60 per cent or $6.7bn.

USDA officials admitted to the GAO that they have had difficulty finding creditworthy countries for the programme. Congress has required the Commodity Credit Corporation, the USDA's bank, to make available "not less than $5bn" in short-term guarantees for each of the fiscal years 1991 to 1995 and not less than $500m a year in intermediate loans in the same period. Another $1bn is supposed to be made available for exports to emerging democracies.

The GAO was told that loan guarantees have often been the result of political considerations. Last year, however, Congress prohibited the use of the programme for foreign policy purposes.

The CCC has been experiencing difficulty in collecting its debts, according to the GAO. Its practice has been to suspend further guarantees until payments are made or rescheduled and to use diplomatic channels to encourage repayment.

Of the $2.7bn in rescheduled debt last May, $1.4bn has come due, with $900m of that delinquent.

BRAZILIAN and Argentinian officials are to meet this week to discuss a compromise on Brazil's plan to import 700,000 tonnes of subsidised wheat from the United States, writes John Barham in Buenos Aires.

Meetings were announced after the economy ministers of both countries met in Rio de Janeiro at the weekend.

The announcement that Brazil planned to import subsidised wheat fell like in bombshell in Buenos Aires, which considers Brazil a captive market. Argentinian officials were outraged that their principal trading partner and a founding member of the nascent Southern Cone Common Market would accept subsidised wheat.

Earlier, Argentine officials said they accepted a US promise to start exporting only after Argentina had filled its 2m tonne quota. Officials have confirmed that the government is trying to use the threat of US wheat sales to press middlemen and grain exporters to moderate their prices and so avoid a surge in inflation.

Low cocoa prices sap Malaysian resolve to beat the podborer

By Lim Siong Hoon

FOR NEARLY a decade cocoa planters in Malaysia waged periodic, and successful, battles to beat back a species of moth caterpillar nicknamed the "podborer". It is able to penetrate the hard fruit pods, feed on the pulp, and stunt the growth of beans.

Conopomorpha cramerella is making a comeback today because low cocoa prices in the world market have started to weaken the planters' resolve to deal with it.

As a result podborers have infested more than 5,000 hectares in peninsular Malaysia, compared with 4,000 hectares before May 1990.

The area may seem small, just 3 per cent of the 148,000 hectares of cocoa farms in a peninsula which accounts for 35 per cent of the 247,000 tonnes in 1990 national production. The remainder comes mainly from the Borneo state of Sabah.

But the infestations, coupled with low returns, have touched off drastic measures. Plantations are beginning to destroy their cocoa trees while the government turns a blind eye to a quarantine law intended to deal with the pest.

Plantations have destroyed up to 1,000 hectares of cocoa trees in recent months. With yields of between 700 kg to 1,200 kg per hectare, they are some of the country's best growers.

The destruction also has to do with the quarantine law which requires planters to eradicate the pest through a number of prescribed measures, such as burying the infected pods and employing intensive pesticide spraying.

But such measures double the production cost at a time when planters are least willing to spend. Mr Ooi Ling Hoak, an agronomist, said: "If they cannot conform to the law, they want to chop down the trees."

Among state-subsidised smallholdings, typically a quarter to one hectare, there has been a strong resistance to complying with the law, partly because their yields are even lower. The government's offer to compensate them, at about M$1,000 for each hectare of cocoa crop destroyed, were also rejected.

The defiance opens the smallholders to prosecution, but according to planters this would be unlikely for political reasons. And without their co-operation the infestation is certain to speed up.

Rising infestation is intensifying the debate between planters and the government about whether to change or nullify the law to switch the emphasis from eradicating the podborer simply to containing it.

Mr Ooi said: "For practical reasons eradication looks impossible. Maybe we should learn to live with the pest."

In Sabah, where the law is absent, the podborers spread through the state within two years so dealing with them has become "just another production cost item" said Mr Ooi.

The Malaysian Cocoa Growers' Council argues for a threshold level – 10 per cent to 15 per cent is suggested for the infestation of every 1,000 pods – beyond which control measures be required.

At that level the loss on bean extraction would be compensated for by savings from the existing high production costs incurred by law. That, an agricultural official said, estates could tolerate.

A gold mine that takes the breath away

Kenneth Gooding visits the Choquelimpie project high in the Chilean Andes

High stake: at an altitude of 4,825 metres 4.5m tonnes of rock a year is being shifted from a dead volcano

Going to the Choquelimpie gold mine in Chile takes your breath away – literally. It is the highest commercial mine in the world, in the mouth of a dead volcano 4,825 metres (15,777 ft) up in the high Andes.

At this height air has only about half as much oxygen as at sea level. Pressure in the lungs is reduced by half. Hearts have to beat faster and breathing is more rapid as the body tries to absorb enough oxygen.

This poses special problems for an enterprise which is shifting 4.5m tonnes of rock a year to leach out the gold and silver.

This is a mine where a medical is compulsory for visitors, when blood pressure and pulse rates are checked. One person in three suffers altitude sickness which causes headaches, nausea and, sometimes, vomiting. But severe cases can be countered by bottled oxygen, which is kept on hand.

High altitude mining, which Choquelimpie is pioneering in Chile, has other complications. There are ferocious "tormentas electricas" – electrical storms which streak in from Bolivia, 20 km to the east, between January and March, fall into the volcano's mouth, spit lightning in all directions and bring a mixture of rain and snow which halts all operations.

At such times the air is filled with static electricity which makes the hair stand straight up on end. Lightning conductor masts and deflecting cables failed to prevent a miner being struck down by lightning and killed in March this year as he stood defiantly with hands in pockets on the edge of the waste dumps.

Many of the 700 employees are recruited from fishing towns at sea level. Never before have they touched snow, let alone driven earth-moving equipment in it. Four people suffered eye problems from the effects of the glare of sunshine on snow before the management realised that the miners had to be taught to wear sunglasses to keep out the intense ultraviolet light. Sunglasses are now supplied to employees as part of their standard equipment.

Sociedad Contractual Minera Vilacollo, a partnership between Billiton, the Royal Dutch/Shell offshoot (41.7 per cent), Northgate of Canada (35.3 per cent) and Citibank (23 per cent), which operates Choquelimpie, is helping to finance a study of the effects of high altitude on miners. It is also piecing together information about protection from electrical storms which is frequently proving to be contradictory.

All this will be of immense value as mining activity builds up in Chile, one of the world's most mineral-rich countries and one which is attracting a great deal of foreign investment since its recent return to democratic government.

Much of Chile's treasure is locked in the high Andes. Breathtaking current projects include Coldelco's Andina copper operation at 4,200 metres (13,734 ft); La Coipa gold project (Placer Dome and TVX Gold) at 4,100 metres (13,407 ft) and Cominco's Quebrada Blanca copper project at 4,280 metres (14,000 ft).

Two of the Choquelimpie partners, Billiton and Citibank, have a potentially important copper project, Collahuasi, not far from Choquelimpie, at 4,400 metres (14,388 ft). Mr Rodney Lay, managing director of Billiton Chile, said there was no way of knowing if individual geologists needed for the current $10m exploration programme at Collahuasi would be able to work at that altitude except by taking each one there to see what happened.

"There seems to be no pattern. Extremely fit and active people have been known to suffer badly while some overweight, heavy-smoking types feel no effects," he said.

At Choquelimpie it takes about two weeks for the first effects of high altitude working to wear off as the body builds up more red corpuscles in the blood. After about two months something like full adjustment takes place although muscular strength is reduced. Recent tests have shown that problem-solving ability and creativity is permanently weakened.

Because humidity is substantially reduced at great heights, employees suffer from dehydration unless they drink a great deal more than usual. But the bad news is that alcohol taken at extreme height has little of the usual relaxing impact.

In any case, employees are advised against heavy drinking or taking tranquillisers to help overcome the sleeplessness which is another perennial problem at great altitudes.

Shallow breathing when sleeping often does not allow the lungs to collect enough oxygen and the sleeper wakes to breathe more deeply. Artificial aids to sleep might cause gradual suffocation.

The Vilacollo partners decided it would be more comfortable for employees if Choquelimpie's mining camp was a little lower, at Putre, a small town at 3,500 metres (11,445 feet) with employees bussed in for the three shift, round-the-clock working.

They travel through spectacular mountains of brown, sepia and red, covered with detritus spewed from long-dead volcanoes. The mine is in a vicuna reserve and these animals, along with llamas and guanacos, roam freely just outside the fence put up to keep them from harm. The scene is dominated by two brooding, snow-capped volcanoes, Parinacota and Pomerape.

According to Mr Orlando Oliveros, the general manager, Vilacollo offers the best pay in the region. Even so, annual employee turnover is a startling 70 per cent. Even after the two-month adjustment period some suffer depression and feel they cannot stay on.

In spite of this employee turnover Choquelimpie shifted 4.5m tonnes of material (2.163m tonnes of ore and the rest waste) last year, twice the rated capacity of its plant. It produced 100,390 troy ounces of gold – to rank as Chile's third-largest gold mine – and 640,000 ounces of silver. Profit after tax from this precious metal was US$11.8m.

Mr Patricio Palma, Choquelimpie's safety officer, says that altitude has a greater impact on younger people so that most reportable accidents involve 22 to 24-year-olds. Most accidents occur between noon and four o'clock when lunch is being digested, leaving less oxygen for the brain and causing a drop in concentration.

Next month the University of Santiago's cardiology department will start a study of Choquelimpie's employees, financed by Vilacollo and Shell Chile.

All personnel at the mine will be checked 1,100 metres lower at Putre, and in Arica, a sea level town, in an attempt to identify any with heart problems or others potentially at risk.

Mr Palma said: "We want to know more about how hearts and lungs function at high altitudes to prevent problems developing, possibly with the help of drugs." He said changes to the mine's working patterns might be called for.

The initial four-week study will be followed by annual follow-up tests to see whether there are any long-term effects.

Mr Jan Akkerman, Choquelimpie's chief geologist, is not deterred by what the research might produce, and is arranging a joint scientific-exploration venture up the slopes of the nearby volcanoes which soar to 6,330 metres (20,699 ft), where there is even less oxygen but where he reckons more mineral riches are waiting to be found.

WORLD COMMODITIES PRICES

MARKET REPORT

Nickel prices closed at the day's lows on the LME yesterday on general liquidation, although sporadic consumer interest prevented substantial losses, dealers said. Three-month nickel is testing support around $8,300 a tonne and a breach of that would put prices on course towards $7,775, some said. But the market is likely to be cautious about extending declines as labour talks at Canadian producer Inco near a crucial stage, dealers added. The current labour contract there expires at the end of May. Copper prices closed ahead, but off the day's highs. Dealers said copper mostly consolidated in routine trading, holding comfortably above $2,200 a tonne and shrugging off news that the Polish copper miners strike had ended. LME warehouse stock figures are expected to rise some 4,000 tonnes today. Aluminium prices fluctuated under the influence of the dollar; its early strength, coupled with the holiday in many European centres, dampened hopes of consumer buying interest developing. London cocoa edged ahead, although some traders expected bigger gains because of unrest in Cameroon. In New York cotton futures hit new lifetime peaks before midday on continued wet weather and fears of delayed plantings.

Compiled from Reuters

London Markets

SPOT MARKETS		
Crude oil (per barrel FOB)		+ or -
Dubai	$18.10-8.20u	-.025
Brent Blend (dated)	$18.80-8.95	+0.15
Brent Blend (Jul)	$19.55-9.60	
W.T.I. (1 pm est)	$21.15-1.25u	+0.05
Oil products (NWE prompt delivery per tonne CIF)		+ or -
Premium Gasoline	$250-252	
Gas Oil	$185-187	
Heavy Fuel Oil	$69-71	
Naphtha	$213-215	+2
Petroleum Argus Estimates		
Other		+ or -
Gold (per troy oz)♣	$355.35	+0.05
Silver (per troy oz)♣	402.5c	-2.50
Platinum (per troy oz)	$388.25	
Palladium (per troy oz)	$94.10	-0.05
Aluminium (free market)	$1295	-10
Copper (US Producer)	104c	
Lead (US Producer)	34c	
Nickel (free market)	388c	+2
Tin (Kuala Lumpur market)	15.49r	
Tin (New York)	287c	-1
Zinc (US Prime Western)	62c	
Cattle (live weight)†	112.91p	+0.10*
Sheep (dead weight)†	188.94p	-17.16
Pigs (live weight)†	95.51p	-0.74*
London daily sugar (raw)	$197.8q	-0.70
London daily sugar (white)	$268.0q	-3.00
Tate and Lyle export price	£223.5	+2.5
Barley (English feed)	£108v	
Maize (US No. 3 yellow)	£179.5	
Wheat (US Dark Northern)	£100	
Rubber (Jun)♥	53.50p	-0.25
Rubber (Jul)♥	54.00p	-0.25
Rubber (KL RSS No 1 Jun)	228.5m	+1.0
Coconut oil (Philippines)§	Unq	
Palm Oil (Malaysian)§	Unq	
Copra (Philippines)§	Unq	
Soyabeans (US)	£159	+1
Cotton "A" index	84.75c	
Woollops (64s Super)	384p	-3

£ a tonne unless otherwise stated. p-pence/kg. c-cents/lb. r-ringgit/kg. q-Jun/Jul t-Jun u-Jul v-Jul/Aug. x-Jul/Aug. †Meat Commission average fatstock prices. * change from a week ago. ♥London physical market. §CIF Rotterdam. ♣ Bullion market close. m-Malaysian cents/kg.

SUGAR – London FOX			($ per tonne)	
Raw	Close	Previous	High/Low	
Aug	171.40	170.00	172.00	167.80
Oct	170.80	169.00	171.60	167.60
Mar	172.20	171.00	172.00	169.00
Aug	180.80		175.00	
White	Close	Previous	High/Low	
Aug	279.0	277.0	280.0	275.0
Oct	248.5	247.5	249.7	245.5
Dec	244.5		242.5	241.5
Mar	247.0	244.0	245.8	242.5

Turnover: Raw 475 (214) lots of 50 tonnes. White 561 (759)

CRUDE OIL – IPE			$/barrel	
	Latest	Previous	High/Low	
Jul	19.57	19.58	19.70	19.55
Aug	19.80	19.72	19.88	19.75
Sep	20.00	19.98	20.02	19.89
Oct	20.05	20.05	20.05	19.95
IPE Index	19.40	19.07		

Turnover 6150 (13525)

GAS OIL – IPE			$/tonne	
	Latest	Previous	High/Low	
Jun	179.00	179.00	180.00	178.50
Jul	174.50	173.25	175.50	174.50
Aug	177.00	177.75	177.00	176.50
Sep	178.50	179.50	179.00	178.50
Oct	182.25	182.00	182.25	181.00
Nov	184.00	183.75	184.00	182.50
Dec	185.00	184.50	185.00	183.00
Jan	180.75	181.00	180.75	180.50

Turnover 2594 (8582) lots of 100 tonnes

TEA

There was an improved demand although the brightest liquoring teas generally sold at easier rates, reports The Tea Brokers' Association. Mediums were well supported and sometimes gained 3p to 5p. Central African teas were irregular and prices were barely steady. The few Ceylons on offer met strong competition and were 4p to 8p dearer. Offshore teas sold well at firm rates. Quotations: quality 170p per kilo, medium 114p, low medium 73p.

COCOA – London FOX			£/tonne	
	Close	Previous	High/Low	
May	598	590	599	594
Jul	613	609	616	606
Sep	640	638	644	633
Dec	676	676	679	670
Mar	707	707	710	702
May	730	730	733	726
Jul	752	750	753	750

Turnover: 2025 (3251) lots of 10 tonnes
ICCO indicator prices (SDRs per tonne). Daily price for May 17 778.62 (779.57) 10 day average for May 20 791.70 (794.80)

COFFEE – London FOX			£/tonne	
	Close	Previous	High/Low	
May	539	531	538	536
Jul	565	558	565	560
Sep	587	582	589	584
Nov	606	602	608	604
Jan	625	621	626	626
Mar	639	638	642	638

Turnover:1436 (4499) lots of 5 tonnes
ICO indicator prices (US cents per pound) for May 17 : Comp. daily 68.41 (68.26). 15 day average 68.19 (68.19)

POTATOES – London FOX			£/tonne	
	Close	Previous	High/Low	
Mar	133.5	134.0	134.0	
Apr	135.2	136.0	136.0	134.5

Turnover 102 (90) lots of 40 tonnes.

SOYAMEAL – London FOX			£/tonne	
	Close	Previous	High/Low	
Jun	132.50		132.50	
Aug	130.00	127.50		
Oct	134.00	134.00	134.00	
Feb	142.00	141.00	142.00	

Turnover 70 (115) lots of 20 tonnes.

FREIGHT – London FOX			$10/index point	
	Close	Previous	High/Low	
May	1691	1683	1692	1689
Jun	1595	1585	1599	1580
Jul	1489	1447	1490	1485
Oct	1580	1558	1590	1570
Jan	1590	1555	1585	1575
BFI	1669	1660		

Turnover 263 (448)

GRAINS – London FOX			£/tonne	
Wheat	Close	Previous	High/Low	
May	138.90	136.50		
Jun	137.60	137.25	138.00	137.50
Sep	111.45	111.25	111.40	
Nov	114.40	114.25		
Jan	117.70	117.70	117.70	
Barley	Close	Previous	High/Low	
May	121.50	121.00		
Sep	107.90	107.85		
Nov	111.50	111.40	111.50	

Turnover: Wheat 93 (251), Barley 10 (12).
Turnover lots of 100 tonnes.

PIGS – London FOX		(Cash Settlement) p/kg	
	Close	Previous	High/Low
Jun	120.3	120.3	120.5
Jul	116.8		117.0
Oct	112.8		112.5
Jan	103.0	104.4	104.0

Turnover:33 (17) lots of 3,250 kg

MGMI – London FOX					
	Close	Prev.	High	Low	Vol
Indx	139.74	138.97			
Jun	140.60	140.80	140.60		65
Jul	141.20	141.20	141.20		45
Sep	141.60	141.50	141.60		20
Dec	141.80	142.30	141.80		20
Mar	142.50	143.00	142.50		20
Jun	143.00	143.30	143.00		10

LONDON METAL EXCHANGE				(Prices supplied by Amalgamated Metal Trading)		
	Close	Previous	High/Low	AM Official	Kerb close	Open Interest
Aluminium, 99.7% purity ($ per tonne)					Total daily turnover 28,068 lots	
Cash	1294-6	1307-9	1290/1290	1289-90		
3 months	1325-6	1336-7	1330/1315	1320-1	1326-7	74,481 lots
Copper, Grade A (£ per tonne)					Total daily turnover 28,309 lots	
Cash	1305-6	1277-9	1306/1303	1306-6		
3 months	1313-4	1296-7	1322/1309	1322-3	1313-4	113,626 lots
Lead (£ per tonne)					Total daily turnover 1,196 lots	
Cash	321-3	326-8		322.5-3.5		
3 months	335-6	339-40	338/335	335.5-6.0	336-7	13,756 lots
Nickel ($ per tonne)					Total daily turnover 3,105 lots	
Cash	8300-20	8340-60	8330/8325	8325-5		
3 months	8350-60	8390-400	8400/8300	8370-5	8275-300	10,908 lots
Tin ($ per tonne)					Total daily turnover 951 lots	
Cash	5695-705	5760-70	5695/5695	5695-700		
3 months	5760-5	5840-50	5800/5785	5775-85	5760-5	6,650 lots
Zinc, Special High Grade ($ per tonne)					Total daily turnover 4,915 lots	
Cash	1067-8	1086-9	1087/1085	1085.5-6.0		
3 months	1103-4	1100-2	1106/1100	1099-100	1102-4	28,627 lots

LME Closing £/$ rate:
SPOT: 1.7195 3 months: 1.6964 6 months: 1.6777 9 months: 1.6634

LONDON BULLION MARKET (Prices supplied by N.M.Rothschild)		
Gold (fine oz)	$ price	£ equivalent
Close	355.20-355.50	
Opening	353.80-354.20	
Morning fix	353.90	207.998
Afternoon fix	355.00	207.178
Day's high	355.30-355.60	
Day's low	353.40-353.70	

Loco Ldn Mean Gold Lending Rates (Vs US$)			
1 month	5.28	6 months	5.15
2 months	5.23	12 months	5.10
3 months	5.20		

Silver fix	p/fine oz	US cts equiv
Spot	235.15	400.50
3 months	241.90	406.40
6 months	248.05	412.25
12 months	260.70	425.95

GOLD COINS (Prices supplied by Engelhard Metals)		
	$ price	£ equivalent
Krugerrand	355.00-358.00	207.25-207.75
Maple leaf	364.00-365.00	212.50-213.00
New Sovereign	86.00-87.00	50.00-50.50

TRADED OPTIONS				
Aluminium (99.7%)	Calls		Puts	
Strike price $ tonne	Jul	Sep	Jul	Sep
1200	118	143	3	10
1300	43	72	27	73
1400	6	29	91	30
Copper (Grade A)	Calls		Puts	
2150	121	132	25	59
2250	62	81	65	105
2350	26	45	126	168
Coffee	Jul	Sep	Jul	Sep
500	65		1	
550	24	48	10	11
600	5	21	41	34
Cocoa	Jul	Sep	Jul	Sep
550	69		1	
600	22	52	10	12
650	4	24	52	34
Brent Crude	Jul	Aug	Jul	Aug
1850			13	
1900				
1950	53	90		

New York

GOLD 100 troy oz.; $/troy oz.				
	Close	Previous	High/Low	
May	357.4	355.2	0	0
Jun	358.1	356.0	358.8	355.5
Jul	359.8	357.7	0	0
Aug	360.5	358.6	361.0	357.8
Oct	363.5	361.5	363.8	362.0
Dec	366.6	364.6	367.1	363.9
Feb	369.9	367.9	0	0
Apr	373.0	370.9	0	0
Jun	376.4	374.3	375.0	375.0

PLATINUM 50 troy oz; $/troy oz.				
	Close	Previous	High/Low	
Jul	392.7	392.1	392.8	390.5
Oct	397.0	396.4	398.0	395.0
Jan	401.2	400.6	400.5	400.5
Apr	404.8	404.2	405.0	405.0
Jul	408.8	408.2	0	0

SILVER 5,000 troy oz; cents/troy oz.				
	Close	Previous	High/Low	
May	402.6	400.3	403.0	398.0
Jun	402.9	400.7	0	0
Jul	405.5	403.3	406.5	400.0
Sep	410.3	408.3	411.5	405.0
Dec	417.2	415.1	418.0	413.0
Jan	419.2	417.1	0	0
Mar	424.7	422.6	423.5	420.0
May	429.9	427.8	0	0
Jul	435.1	433.0	0	0
Sep	440.8	438.7	0	0

HIGH GRADE COPPER 25,000 lbs; cents/lbs				
	Close	Previous	High/Low	
May	100.20	99.50	100.50	98.90
Jun	99.80	99.25	100.10	98.60
Jul	98.80	98.00	99.15	98.50
Aug	98.35	97.60	0	0
Sep	97.90	97.25	98.25	97.75
Oct	97.60	97.00	0	0
Nov	97.30	96.70	0	0
Dec	97.00	96.45	97.30	96.60
Jan	96.75	96.15	97.00	97.00
Feb	96.40	95.80	0	0

CRUDE OIL (Light) 42,000 US galls $/barrel				
	Latest	Previous	High/Low	
Jun	21.25	21.18	21.34	21.21
Jul	21.23	21.21	21.32	21.21
Aug	21.32	21.34	21.36	21.25
Sep	21.43	21.45	21.44	21.38
Oct	21.50	21.56	21.53	21.46
Nov	21.60	21.63	21.61	21.63
Dec	21.58	21.69	21.67	21.55
Jan	21.54	21.62	21.55	21.51
Feb	21.48	21.56	21.50	21.45
Mar	21.42	21.51	21.44	21.40

HEATING OIL 42,000 US galls, cents/US galls				
	Latest	Previous	High/Low	
Jun	5600	5591	5600	5585
Jul	5655	5658	5670	5630
Aug	5730	5735	5755	5725
Sep	5875	5880	5880	5865
Oct	5990	5988	6000	5975
Nov	6080	6083	6085	6080
Dec	6180	6173	6180	6170
Jan	6180	6178	6180	6170
Feb	6075	6073	6076	6075
Mar	5875	5848	5875	5850

COCOA 10 tonnes;$/tonnes				
	Close	Previous	High/Low	
Jul	992	997	1002	990
Sep	1020	1025	1027	1017
Dec	1059	1066	1066	1058
Mar	1101	1108	1107	1100
May	1130	1135	0	0
Jul	1158	1163	0	0
Sep	1186	1186	0	0

COFFEE "C" 37,500lbs; cents/lbs				
	Close	Previous	High/Low	
May	88.65	88.50	89.30	88.65
Jul	89.75	89.60	90.20	89.60
Sep	91.90	91.90	92.35	91.75
Dec	94.90	94.95	95.20	94.90
Mar	97.70	98.00	0	0
May	99.90	99.75	0	0
Jul	101.75	102.00	0	0
Sep	104.00	103.30	0	0

SUGAR WORLD "11" 112,000 lbs; cents/lbs				
	Close	Previous	High/Low	
Jul	8.07	7.85	8.08	7.82
Oct	7.76	7.62	7.79	7.61
Mar	7.83	7.70	7.84	7.70
May	7.91	7.82	7.92	7.82
Jul	8.03	7.93	0	0
Oct	8.15	8.12	0	0

COTTON 50,000; cents/lbs				
	Close	Previous	High/Low	
Jul	94.05	92.30	94.25	92.75
Oct	82.66	81.00	83.00	82.00
Dec	75.90	73.95	75.95	74.90
Mar	76.65	74.85	76.65	76.00
May	76.80	75.55	77.05	76.25
Jul	77.10	75.83	77.50	76.80

ORANGE JUICE 15,000 lbs; cents/lbs				
	Close	Previous	High/Low	
Jul	117.05	117.60	117.90	116.95
Sep	117.45	118.25	118.35	117.45
Nov	116.55	117.30	117.30	116.25

INDICES

REUTERS (Base: September 18 1931 = 100)			
May 20	May 17	mnth ago	yr ago
1726.1	1717.0	1737.9	1905.8

DOW JONES (Base: Dec. 31 1974 = 100)				
	May 16	May 15	mnth ago	yr ago
Spot	-	128.48	128.69	-
Futures	-	128.50	128.13	-

Chicago

SOYABEANS 5,000 bu min; cents/60lb bushel				
	Close	Previous	High/Low	
May	563/4	564/0	568/4	560/0
Jul	571/6	572/2	575/4	567/6
Aug	574/6	576/4	579/0	571/0
Sep	575/6	577/4	579/0	572/4
Nov	583/0	585/0	587/6	579/4
Jan	594/0	595/4	598/0	590/6
Mar	604/2	606/6	608/4	601/0
May	612/2	614/0	615/4	610/4

SOYABEAN OIL 60,000 lbs; cents/lb				
	Close	Previous	High/Low	
May	19.56	19.78	19.85	19.50
Jul	19.71	19.92	20.05	19.70
Aug	19.86	20.11	20.20	19.86
Sep	20.08	20.28	20.38	20.08
Oct	20.22	20.46	20.57	20.20
Dec	20.56	20.78	20.87	20.56
Jan	20.73	20.92	21.05	20.73
Mar	21.02	21.26	21.35	21.02

SOYABEAN MEAL 100 tons; $/ton				
	Close	Previous	High/Low	
May	171.2	170.5	171.5	169.1
Jul	173.1	172.6	173.3	171.3
Aug	173.8	173.5	174.0	172.5
Sep	174.5	174.5	175.0	173.6
Oct	175.1	175.3	175.8	174.4
Dec	177.4	177.2	177.9	176.5
Jan	178.0	179.0	179.0	177.7
Mar	180.5	180.5	0	0

MAIZE 5,000 bu min; cents/56lb bushel				
	Close	Previous	High/Low	
May	242/2	239/2	242/4	239/2
Jul	247/4	246/0	247/4	245/6
Sep	247/0	245/6	247/0	246/4
Dec	246/2	245/4	247/2	245/2
Mar	253/4	253/0	254/4	252/6
May	257/4	256/6	258/2	257/2
Jul	262/0	261/2	262/0	261/4

WHEAT 5,000 bu min; cents/60lb-bushel				
	Close	Previous	High/Low	
May	287/0	282/4	287/0	282/0
Jul	292/6	288/4	293/0	288/6
Sep	301/4	298/0	301/4	297/4
Dec	313/4	309/6	313/6	309/6
Mar	321/0	318/0	321/0	317/0
May	319/4	315/4	319/4	316/0

LIVE CATTLE 40,000 lbs; cents/lbs				
	Close	Previous	High/Low	
Jun	74.37	74.92	75.40	74.32
Aug	72.30	73.12	73.47	72.25
Oct	74.30	75.12	75.27	74.20
Dec	74.97	75.57	75.77	74.90
Feb	74.40	75.25	75.35	74.40
Apr	75.30	75.80	75.75	75.25
Jun	73.85	74.40	74.25	73.80

LIVE HOGS 30,000 lb; cents/lbs				
	Close	Previous	High/Low	
Jun	56.80	57.82	57.40	56.62
Jul	55.05	55.85	55.80	54.82
Aug	51.92	52.85	52.70	51.70
Oct	46.75	47.60	47.60	46.70
Dec	46.85	47.40	47.50	46.77
Feb	46.70	47.40	47.00	46.70
Apr	45.25	45.85	45.55	45.15
Jun	49.75	49.95	0	49.75

PORK BELLIES 40,000 lbs; cents/lb				
	Close	Previous	High/Low	
May	59.10	61.10	59.77	59.10
Jul	56.90	57.90	57.70	55.90
Aug	53.20	55.20	54.75	53.20
Feb	55.80	56.80	56.80	55.80
Mar	55.35	57.00	56.50	55.35

LONDON STOCK EXCHANGE

Shares edge forward in poor turnover

THERE WAS just about enough base rate optimism left yesterday to inspire a very modest gain in share prices, but the new equity account opened with one of the lowest daily trading volumes of the year. The day's batch of UK economic data indicated that recession still holds sway over the UK economy, a view from which Mr Norman Lamont, the chancellor of the exchequer, did not appear to dissent, although he stressed that government strategy was "broadly right" in terms of reducing inflation this year.

Investors were restrained by the uncertain political climate following the government's defeat last week in an important by-election. A UK general election has now been virtually ruled out until the autumn, at the earliest, and the government is faring badly in the public opinion polls.

Account Dealing Dates		
*First Dealings:		
Apr 29	May 20	Jun 3
Option Declarations:		
May 16	May 30	Jun 13
Last Dealings:		
May 17	May 31	Jun 14
Account Day:		
May 28	Jun 10	Jun 24

*New-time dealings may take place from 8.30 am two business days earlier.

Speculative interest also faded as market specialists began to take a less ebullient view of Hanson's acquisition of a stake in ICI. The City now believes that the potential regulatory objections may well smother any full bid for Britain's blue chip chemical company.

With most other European bourses closed for the Whitsun holiday, the international blue chips were left to take their lead from Wall Street.

The trading session opened bleakly following publication of the April survey of the distributive trades by the Confederation of British Industry and the Financial Times, which reported that any sustained recovery in the UK economy may still be some way off. The theme was taken up at mid-morning by the announcement that retail sales fell by a provisional 3.5 per cent in April.

But the stock market soon rallied from an early fall which in part reflected downward adjustments to 16 shares in the FT-SE 100 list to allow for dividend payments.

A further half- point cut in base rates is still seen as virtually certain in the weeks ahead; it was merely over-optimism on the timing of such a move that upset the stock market last week.

Encouraged also by expectations of a firm start to the new Wall Street session, borne out in fact by a gain of 12 Dow points in early trading, the London market achieved an advance of 13 Footsie points at best, although this still left it four points short of the 2,450 hurdle.

However, the mood was one of lassitude and share prices could not hold on to even this modest improvement. By the close, the FT-SE Index was just below the day's best at 2,466.6 for a gain on the thinly-traded session of 12.7 points.

Seaq-recorded trading volume, which takes in both customer and inter-dealer business in equities, fell to only 327.2m shares from Friday's level of 492.6m.

Dealers commented that yesterday's Seaq total, which was one of the lowest this year for a normal trading day, indicated that investors were losing faith in the market's prospects for the second quarter of the year. Optimism for the year-end remains high but few analysts expect much lifting of recessionary pressures in the UK before the third quarter of the year.

The strategy team at County NatWest, commenting on a "surprising" fall in institutional liquidity from 8.2 per cent to 5.3 per cent over the first quarter of 1991, predicts that the stock market will face a total of £10bn in rights issues this year. Nikko Securities said that the Hanson/ICI developments had failed to alter a "depressing short-term outlook."

Dividend hopes lift BT

DEALERS reported persistent and strong support for BT (formerly British Telecom) ahead of Thursday's fourth-quarter figures. The shares closed 6 higher at 368p with turnover reaching 4m, slightly above usual levels in the stock.

The majority of analysts expect the group to achieve pre-tax profits of £3.05bn for the year, against £2.69bn last time. The market's range for this year's figures is from £3bn to £3.1bn. The general consensus is that the dividend total will rise from 11.8p to 13.2p.

One school of thought believes BT may hint at a more generous dividend policy on Thursday. One specialist believes there is scope for BT to raise the dividend by 20 per cent per annum for five years.

It was also pointed out that the government will make sure there is a strong appetite for the remaining 49 per cent of BT, scheduled to be sold later this year. Mr Chris Tucker, electronics analyst at Carr Kitcat & Aitken, said he was looking for a further slowing in telephone call volume growth because of the recession, but that this would be more than offset by stringent cost controls which could involve staff cuts of around 15,000.

British Steel talk

British Steel closed unchanged at 128p against a rising market amid talk of a rights issue in order to reduce gearing. However, there was also speculation of a major split among top BS managers over its dividend policy. The suggestion in the market was that those favouring maintaining the dividend had gained the upper hand at board level.

MGN at discount

Mirror Group Newspapers (MGN) ended its second day of trading below the flotation price of 125p amid signs of selling by smaller investors.

Overseas shareholders – estimated to own around 60 per cent of the company – were also sellers, but a two-way pull developed as support emerged from US investment houses and a handful of UK institutions.

The smaller investors sold on disappointment that MGN had not held at a premium to the flotation price. "With no immediate profits on offer, many have decided to cut their losses and get out now," one analyst commented. MGN finished 2 easier at 123½p on turnover of 14m.

Courtaulds falls

Investors continued to heed advice given a week or so ago and realised profits in Courtaulds ahead of Thursday's preliminary results. Smith New Court at that time urged caution, believing the dual effect of recession and adverse exchange movements had left their mark on the industrial materials group.

"These pressures are unlikely to ease until well into the second half of Courtaulds' current year," said Smith, which advised clients to "topslice" (meaning take profits made through this year's good run in the stock). It closed down 11 more at 384p after relatively thin trade yesterday. The market expects the group to report profits of £175m to £180m, compared with £168.1m last time.

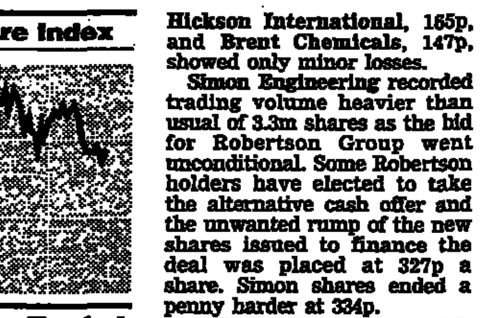
Oil shares were among the market's most impressive performers, with a number of broking firms taking the view that the sector had been oversold in recent weeks, having retreated from a relative of 220 down to 196.

County NatWest expects the relative to recover to around 210 if the crude oil market tightens due to the absence of Iraqi and Kuwaiti oil exports.

County said it would be safer to play a rise in the sector through Shell and Enterprise rather than through BP. The County stance, coupled with a number of positive noises on the stock from other brokers, boosted Shell by 11 to 514p on good turnover of 4m. BP, quoted ex the dividend, managed a 3 rise at 321p, on 5.2m.

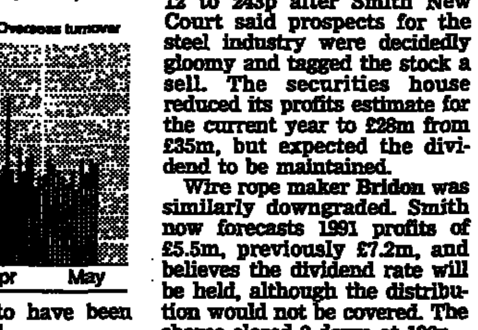
Enterprise, responding to a buy recommendation from its brokers, hardened 2 to 515p on heavy turnover of 2.5m; a big stock overhang, said to have developed after the joint venture deal with Elf was put in place, was said to have been largely eliminated.

FT-A All-Share Index



Equity Shares Traded

Turnover by volume (million)
Excluding:
Intra-market business & Overseas turnover



British Gas gave another strong performance, closing 4 ahead at 244¼p on 4.1m shares, with a number of brokers highlighting the 4.25 per cent on the final dividend alone. Gas's figures are due on May 30.

ICI turned back 14 to 1233p awaiting any further developments in the Hanson situation.

A negative reassessment by Smith New Court of prospects for the chemical industry led to profits downgradings across the board. Few companies escaped Smith's revisions, which followed a series of gloomy statements on first-quarter trading. Most of these were made at recent annual meetings. April was also said to have been a bad month.

Laporte, the sector favourite outside the leading groups, was affected more than any other and ended 8 off at 562p. Smith cut its forecast of current year profits to £113m, from £120m, but added that the stock should be bought on weakness. Hickson International, 165p, and Brent Chemicals, 147p, showed only minor losses.

Simon Engineering recorded trading volume heavier than usual of 3.3m shares as the bid for Robertson Group went unconditional. Some Robertson holders have elected to take the alternative cash offer and the unwanted rump of the new shares issued to finance the deal was placed at 327p a share. Simon shares ended a penny harder at 334p.

ASW Holdings, the Welsh steel and wire group, tumbled 12 to 243p after Smith New Court said prospects for the steel industry were decidedly gloomy and tagged the stock a sell. The securities house reduced its profits estimate for the current year to £28m from £35m, but expected the dividend to be maintained.

Wire rope maker Bridon was similarly downgraded. Smith now forecasts 1991 profits of £5.5m, previously £7.2m, and believes the dividend rate will be held, although the distribution would not be covered. The shares closed 9 down at 136p.

William Cook was one of few steel-related stocks to resist the downturn. Favourable comment ahead of the annual results, due to be announced today, lifted shares of the UK steel castings group to 283p before a close of only 3 up on balance at 277p. Analysts are looking for profits of around £12m, compared with £9.5m last year.

Associated British Foods rose 10 to 510p following stronger than expected 12-months' results. Profits of £317.4m compared with £283.8m last time and analysts' forecasts of around £320m. Estimates of around £340m for the new accounting year to September were left unchanged. This financial year has been extended by six months to give a year's end in September. Weaker UK milling and baking led to worries over Ranks Hovis McDougall, which reports on Thursday. RHM closed unaltered at 308p.

Brent Walker shares crept up to 34p before settling a net 3 higher at 32p with turnover in the stock reaching 930,000 shares.

News that the two Scottish electricity generators will be sold at yields of between 5.8 per cent and 4.5 per cent was interpreted by the market as extremely bullish for the other electricity stocks.

PowerGen moved up 2¼ to 143½p on 2.9m shares and National Power edged ahead to 136½p on 3.4m. Best performers in the regional electricity shares included Eastern, 5 higher at 190p, while East Midlands, 205p, and Southern, 210p, were up 4 each. The Electricity Package finished 20 stronger at £2138.

The water issues held up well as more of the big broking houses moved in to support the sector. BZW issued a sector note recommending increased weightings ahead of the preliminary reporting season, while County NatWest said the results "will demonstrate the sector's ability to deliver real dividend growth of around 5 per cent through the early 1990s.

The listing of Harvey & Thompson was suspended at 10.05am with the shares 45 down at 253p. After the close, the company said the suspension had been requested pending announcement of the interim results, including an update on the current position regarding Lightship, by the end of this month.

Renaissance dipped 13 to 49p on news that last year's accounts will be reported two months later than usual, and that the desire to conform with British Venture Capital Association guidelines may cause a "significant reduction" in the company's portfolio valuation, dependent on the outcome of some of the transactions.

USM-quoted Associated Nursing Services dropped to 78p before recovering to end 19 down on balance at 93p on reports that a subsidiary company had been placed into receivership.

■ Other Market statistics, including the FT-Actuaries share index and London Traded Options, Page 25

NEW HIGHS AND LOWS FOR 1991

NEW HIGHS (73).
BRITISH FUNDS (2) Treas. 10pc Cov. 1991, Treas. 2pc IL 1992, INT.BANK AND O'SEAS GOVT. STLG. ISSUES (1) Utd. Mexican Sts. 16.5pc 2008, AMERICANS (4) Bethlehem Steel, CPC, FPL, General Host, BANKS (6) Dai Ichi, Espirito Santo, HSBC, Mitsubishi, Nat. Aust., Ottoman, BREWERS (2) Bulmer (HP), Macdonald Martin A, Seagram, BUILDINGS (1) Berkeley, STORES (2) Clinton Cards, Dewhirst, OS, ELECTRICALS (6) Admiral, Blick, Domino Printing, Druck, Kewill Sys., INDUSTRIALS (18) Amberley, Amer. Bus. Sys., Bowmore, CSR, Channel Express, China Light, Copymore, Cowan de Groot, EIS, Electrolux, Halmocell, Harris (Ph), Heys, Hutchison Whampoa, Novo Nordisk B, Quotient, Sanders & Sidney, Serco, Swire Pacific A, INSURANCE (1) Utd. Friendly B, LEISURE (1) Ex Lands, NEWSPAPERS (2) CIA, Stat-Plus, PROPERTY (1) HK Land, SHOES (1) FII, SOUTH AFRICANS (2) SA Brews., SASOL, TRANSPORT (1) Tibbett & Britten, TRUSTS (11) Aberforth Smllr. Cos., Archimedes Inc., City of Oxford Zero Prf., Derby Inc., First Pac., Gartmore Amer. Sec. Zero Prf., Latin Amer., Mexico Fd., River & Merc. Extra Inc. Wrrnts., Tor Inc., Turkey Tst. Wrrnts., OILS (3) Crusader, LASMO 9⅛pc Prf., Santos, MINES (6) Anglo Amer., ERGO, Elsburg, Gold Fields S.A., Neven Res., Northam Plat.
NEW LOWS (37).
BANKS (1) Reflex Invs., BUILDINGS (4) BMSS, Dunton, Jackson, Watts Blake, STORES (1) Gent (SR), ELECTRICALS (4) Alphameric, First Tech., INSTEM, Plasmec, ENGINEERING (2) Bailey (CH), Dickie (James), INDUSTRIALS (7) African Lakes, Apollo Metals, Assoc. Nursing, Bilston & Battersea, Burndene, Hawthorn Leslie, Westerly, LEISURE (5) Cityvision, Kunick, TVS Ents., Do. 7.4pc Prf., TV-am, MOTORS (1) Malaya, NEWSPAPERS (1) Black (AC), PROPERTY (1) Clayform, TEXTILES (1) Youghal, TRUSTS (1) Renaissance, OILS (3) Alliance Res., Aviva, Ex. Co of Louisiana Serv. A Prfd., MINES (5) Anglesey, Butte, Colby, East Rand Prop., Europa Minerals.

FINANCIAL TIMES STOCK INDICES

	May 20	May 17	May 16	May 15	May 14	Year Ago	1991 High	1991 Low	Since Compilation High	Since Compilation Low
Government Secs	84.18	84.04	84.24	84.20	84.33	79.23	85.88 (19/2)	82.17 (2/1)	127.4 (9/1/35)	49.18 (3/1/75)
Fixed Interest	93.36	93.51	93.58	93.57	93.91	87.45	94.84 (5/4)	90.59 (2/1)	105.4 (28/11/47)	50.53 (3/1/75)
Ordinary Share●	1927.3	1926.2	1938.8	1926.2	1925.3	1810.8	2014.5 (5/4)	1606.3 (16/1)	2014.5 (5/4/91)	49.4 (26/6/40)
Gold Mines	156.4	155.6	156.5	153.8	144.5	212.6	179.7 (14/1)	127.0 (22/2)	734.7 (15/2/83)	43.5 (26/10/71)
FT-SE 100 Share	2466.6	2453.9	2471.9	2459.4	2463.7	2262.1	2545.3 (5/4)	2054.8 (16/1)	2545.3 (5/4/91)	986.9 (23/7/84)
FT-SE Eurotrack 200	1154.43‡	1151.02	1151.25	1146.26	1154.15	-	1176.39 (15/4)	938.62 (16/1)	1176.39 (15/4/91)	938.62 (16/1/91)
●Ord. Div. Yield	4.95	4.96	4.94	4.96	4.96	5.08				
●Earning Yld %(full)	8.69	8.71	8.68	8.77	8.80	11.43				
●P/E Ratio(Net)(☆)	14.22	14.19	14.27	14.06	14.03	10.58				
SEAQ Bargns 4.45pm	24,575	32,707	30,159	26,129	26,463	25,555				
Equity Turnover(£m)†	-	869.00	1286.22	850.81	1082.10	849.99				
Equity Bargains†	-	32,394	29,932	26,076	26,279	26,295				
Shares Traded (ml)†	-	409.7	434.6	375.4	439.3	371.5				

Basis 100 Govt. Secs 15/10/26, Fixed Int. 1928, Ordinary 1/7/35, Gold mines 12/9/55. Basis 1000 FT-SE 100 31/12/83 & FT-SE Eurotrack 200 26/10/90. ☆ Nil 13.83 ‡ Indicative

Ordinary Share Index, Hourly changes Day's High N/A Day's Low 1919.9

Open	9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm
1930.9	1925.9	1924.1	1926.8	1929.2	1929.2	1926.4	1920.2	1926.4

FT-SE 100, Hourly changes Day's High 2467.1 Day's Low 2452.9

Open	9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm
2453.0	2460.0	2459.2	2462.8	2464.5	2463.8	2462.8	2456.7	2465.5

FT-SE Eurotrack 200, Hourly changes‡ Day's High N/A Day's Low N/A

Open	10 am	11 am	12 pm	1 pm	2 pm	3 pm
1155.77	1155.04	1156.19	1155.92	1157.45	1158.96	1154.90

GILT EDGED ACTIVITY

Indices*	May 17	May 16
Gilt Edged Bargains	102.9	95.4
5 – Day average	101.2	96.6

*SE Activity 1974.
†Excluding intra-market business & Overseas turnover.

London report and latest Share index: Tel. 0898 123001

TRADING VOLUME IN MAJOR STOCKS

	Volume 000's	Closing Price	Day's change		Volume 000's	Closing Price	Day's change		Volume 000's	Closing Price	Day's change		Volume 000's	Closing Price	Day's change
ADT	667	75	-1	Dalgety	212	373		Manpower	30	70		Slough Ests	437	244	+1
ASDA Group	4,400	111	+1	De La Rue	479	359	+4	Manweb	10	250	+2	Smith (W H) A	389	370	-2
Abbey National	1,600	271	+1	Dixons	664	197	+4	Marks & Spencer	1,600	250	+½	Smith & Nephew	1,000	124	+1½
Albert Fisher	313	121		ECC Group	99	419	+1	Maxwell Comms.	220	230	-1	SmKl Beecham	737	773	+12
Allied-Lyons	1,200	567	+5½	Eastern Elect.	606	190	+5	Midland Bank	1,200	214	+2	SmKl Beecham Uts.	85	[illegible]	+78
Amstrad	1,200	68	+½	East Midland Elect.	144	205	+4	Midlands Elect.	28	205	+2	Smiths Inds.	34	253	-1
Anglian Water	805	298		Enterprise Oil	2,500	515	+2	NatWest Bank	1,700	309½	-1½	Southern Elect.	530	210	+4
Argos	186	307	+2	Eurotunnel Units	23	473	+2	National Power	3,400	136½	+1½	South Wales Elect.	18	237	+2
Argyll Group	715	361	-1	FKI	142	58	+½	Next	1,100	25	-1	South West Water	345	298	-2
Ass. Brit. Foods	272	510	+10	Ferranti	1,400	11	-1	North West Water	582	259		South West. Elect	120	212	+3
BAA	1,200	434	-5	Fisons	810	462	-2	Northern Elect.	174	210	+2	Southern Water	412	272	-1
BAT Inds	768	698	+15	Gen. Accident	249	541	+2	Northern Foods	21	442		Standard Chartd.	65	353	-1
BET	620	184	+4	General Elect.	5,000	195	+3	Norweb	28	212	+2	Storehouse	2,200	100	-2
BICC	1,900	425	+2	Glaxo	2,300	1125	+29	Pearson	134	755	+1	Sun Alliance	63	373	+3
BOC	1,000	553	+12	Glynwed Int.	399	235	-3	P & O	312	593	+8	T&N	568	150	-2
BPB Inds	603	212	-3	Granada	316	158	-2	Pilkington	1,400	181½	+2½	TI Group	44	487	
BTR	1,300	378	+1	Grand Met.	1,300	759	+6	PowerGen	2,900	143½	+2½	TSB	668	151	+1
Bank of Scotland	2,400	106	-1	GUS A	429	1185	+17	Prudential	2,400	229	+1	Tarmac	225	244	+2
Barclays	3,900	434	-1	GRE	1,000	204	-2	RHM	383	303		Tate & Lyle	765	358	+½
Bass	361	952	+3	GKN	2,300	335	+1	RMC	57	665		Taylor Woodrow	1,000	236	+1
Beazer	475	172	+1	Guinness	557	940		RTZ	236	527	+3	Tesco	1,400	280	-1
Berisford Int.	946	38	+1	Hammerson 'A'	32	625	+4	Racal	1,400	224		Thames Water	1,000	308	-1
Blue Circle	676	260		Hanson	4,200	216	+½	Racal Telecom	479	372	+8	Thorn EMI	37	730	+4
Boots	526	365	+1	Hanson Warrants	67	36½	+½	Rank Org.	1,800	702	+1	Trafalgar House	832	248	
Bowater	45	690		Harrisons Crosfield	346	152	+4	Reckitt & Colman	158	1470	-1	Trusthouse Forte	2,100	267	+1
Brit. Aerospace	440	600	-2	Hawker Sidd.	529	589	+14	Redland	553	573	+1	Ultramar	747	312	+3
British Airways	5,800	169½	-7½	Hillsdown	699	229	-2	Reed Intl.	280	413		Unigate	826	278	-9
British Gas	4,100	244¼	+4	IMI	306	230	-1	Reg. Elect. Pkg Uts	1	£2138	+20	Unilever	964	730	+6
British Land	255	282	+3	ICI	2,200	1233	-14	Rentokil	70	207	+1	United Biscuits	384	369	+3
BP	5,200	321	+3	Inchcape	149	530	+3	Reuters	286	819	+4	Utd. Newspapers	142	345	
British Steel	1,100	128		Kingfisher	860	472	+½	Rolls Royce	1,800	155	+1	Water Package Uts.	2	£2068	-10
British Telecom	4,060	368	+6	Ladbroke	690	270	+3	Rothmans	312	850	+17	Wellcome	233	978	+5
Bunzl	419	80	-1	Land Securities	718	528	+4	Ryl Bk Scotland	395	178		Welsh Water	288	332	
Burmah Castrol	164	541	-6	Laporte	168	562	-8	Royal Insurance	1,000	434	+5	Wessex Water	421	337	+1
Burton	3,600	78½	+1½	Legal & General	494	425	-3	Saatchi	3,100	18¾	-¼	Whitbread 'A'	207	482	+2
Cable & Wire.	765	524	+6	Lloyds Abbey	733	398	-2	Sainsbury	1,200	374	+1½	Wiggins Teape	789	227	
Cadburys	984	357	+3	Lloyds Bank	493	331	-1	Scottish & New.	327	391	+3	Williams Hldgs.	1,300	288	+2
Calor Group	264	219	-2	LASMO	656	341	+11	Sears	3,900	83½	+½	Willis Corroon	453	236	+3
Carlton Comms.	306	431	-3	London Elect.	118	207	+2	Sedgwick	718	244	+1	Wimpey	188	209	+3
Coats Viyella	1,100	144	-1	Lonrho	1,700	256	+5	Seaboard	12	200	+1	Yorkshire Elect	119	241	+2
Comm. Union	81	494	+3	Lucas	333	157	+2	Severn Trent Water	1,700	274		Yorkshire Water	317	325	-1
Cookson	978	120	+4	MB Caradon	364	220	-3	Shell Transport	4,000	514	+11				
Courtaulds	695	384	-11	MEPC	104	510	+1	Siebe	145	398					

Based on the trading volume for a selection of Alpha securities dealt through the SEAQ system yesterday until 4.30pm.

EQUITY FUTURES AND OPTIONS TRADING

THE derivatives markets were thinly traded as turnover in their underlying securities slackened. The closure of some European centres and an absence of major market-moving news also led to a dearth of institutional interest.

For much of the session the equity futures exerted little influence over the stock market. Instead, the June FT-SE 100 index contract traded at or just below fair value - the premium brokers' calculate is necessary to reflect future dividend payments and the cost of finance.

At one stage, June briefly traded down to the spot index. It quickly recovered and by the close it was at 2,478, up 17 points on the day. The closing premium stood at 11 points against a fair value premium of around 9.

World options markets are also indicating little immediate movement in global equities. Implied volatility, a measure used by options traders of the likelihood of movement in shares, has declined in many world options markets.

UK traded options remained sluggish with turnover down by over a third on Friday's levels. Among the FT-SE index options, the July 2,200 puts were the most active.

Stock options were also quiet. ICI was the busiest as speculation about the Hanson stake continued to generate interest.

LONDON SHARE SERVICE

BRITISH FUNDS

1991 High	1991 Low	Stock	Price £	+ or –	Yield Int.	Yield Red.
"Shorts" (Lives up to Five Years)						
[illegible]						
Five to Fifteen Years						
100¼	95⅜	Conversion 10pc 1996	98¾	+⅛	10.15	10.31
49⅞	48⅞	Do. 10pc 1996 B	48¾	+⅛	10.11	10.26
113⅜	108⅞	Treas 13¼pc 1997‡‡	111⅝	+⅛	11.92	10.55
102⅞	97¼	Exch 10½pc 1997	100⅜	+⅛	10.46	10.37
94⅜	89⅞	Treas 8¾pc 1997‡‡	92¾	+⅛	9.43	10.31
122⅞	117	Exch 15pc 1997	119⅝	+⅛	12.54	10.68
98⅜	93⅜	Exch. 9¾pc 1998	96⅜	+⅛	10.08	10.41
85⅜	80⅝	Treas 6¾pc 1995-98‡‡	84⅞	+⅛	7.95	9.78
127⅜	121⅛	Treas. 15½pc '98‡‡	124⅜	+⅛	12.47	10.62
109⅜	104⅝	Exch. 12pc 1998	107⅞	+⅛	11.19	10.54
97⅜	92⅜	Treas 9½pc 1999‡‡	95⅝	+⅛	9.92	10.30
111⅜	105⅜	Exch. 12¼pc 1999	108⅝	+⅛	11.27	10.56
102⅝	97⅞	Treas. 10½pc 1999	100⅛	+⅛	10.48	10.45
101⅛	95⅜	Conversion 10¼pc 1999	98⅞	+⅛	10.38	10.45
94⅜	89⅛	Conversion 9pc 2000‡‡	92⅛	+⅛	9.73	10.29
116⅜	110⅝	Treas. 13pc 2000	113⅜	+⅛	11.47	10.66
116⅝	113⅛	Do. 13pc 2000 A	113⅜	+⅛	11.48	10.66
100¼	94⅞	Treas 10pc 2001	97⅞	+⅛	10.25	10.39
118⅜	113⅞	Treas. 14pc '98-01	115⅝	+⅛	12.11	10.74

BRITISH FUNDS—Contd

1991 High	1991 Low	Stock	Price £	+ or –	Yield Int.	Yield Red.
[illegible]						
Undated						
40⅜	37⅞	Consols 4pc	38¾	+⅛	10.32	-
35⅜	33⅜	War Loan 3½pc‡‡	34⅝	+⅛	10.14	-
59⅞	57⅜	Conv. 3½pc '61 Aft	58⅜	+⅛	6.02	-
29⅞	28¼	Treas. 3pc '66 Aft	28⅝	+⅛	10.39	-
25⅜	23⅞	Consols 2½pc	24⅝	+⅛	10.26	-
25¼	23⅜	Treas. 2½pc	24⅛	+⅛	10.30	-

Index-Linked

1991 High	1991 Low	Stock	(b)	Price £	+ or –	(1)	(2)
128⅝	125⅞	I'r. 2pc '92‡‡	(97.8)	128⅝	.....	1.70	4.59
117⅜	115⅜	Do. 2'94	(102.9)	117⅜	.....	3.37	4.30
172⅞	168⅜	Do. 2pc '96	(67.9)	172⅞	—	3.45	3.99
141⅜	137⅞	Do 2½pc '01	(78.3)	141⅛	+⅛	3.91	4.22
137⅜	133	Do. 2½pc '03	(78.8)	137⅛	+⅛	4.00	4.27
139⅜	135	Do. 2pc '06	(69.5)	139⅜	+⅛	4.62	4.28
128⅞	124⅞	Do. 2½pc '09	(78.8)	127⅞	+⅛	4.09	4.29
132⅜	128⅜	Do. 2½pc '11	(74.6)	131⅜	+⅛	4.09	4.28
109⅜	105⅜	Do. 2½pc '13	(89.2)	108⅜	+⅛	4.09	4.26
117⅜	113⅛	Do. 2½pc '16	(81.6)	116¼	+⅛	4.63	4.22
113⅜	109⅜	Do. 2½pc '20	(83.0)	112⅜	+⅛	4.03	4.17
95¼	91⅞	Do. 2⅜pc '24‡‡	(97.7)	94⅜	+⅛	3.97	4.11

Prospective real redemption rate on projected inflation of (1) 10% and (2) 5%. (b) Figures in parentheses show RPI base for indexing, (ie 8 months prior to issue) and have been adjusted to reflect rebasing of RPI to 100 in January 1987. Conversion factor 3.945. RPI for September 1990: 129.3 and for April 1991: 133.1.

INT. BANK AND O'SEAS

[illegible]

CORPORATION LOANS

[illegible]

COMMONWEALTH & AFRICAN LOANS

1991 High	1991 Low	Stock	Price £	+ or –	Int.	Red.
90	84½	Sth Rhod. 87-92 Assd.	90	.....	-	-

LOANS

Building Societies

1991 High	1991 Low	Stock	Price £	+ or –	Int.	Red.
104½	102½	N'wide Anglia 3⅞pc Ln 2021	103⅜	.....		5.37
107	104¼	Do. 4.25pcIL '24	106¼	+¼		4.97

Public Board and Ind.

1991 High	1991 Low	Stock	Price £	+ or –	Int.	Red.
53	52	Met. Wtr. 3pc 'B'	52	.....	5.77	9.70

FOREIGN BONDS & RAILS

1991 High	1991 Low	Stock	Price £	+ or –	Div % Gross	Red. Yield
50	50	Greek 7pc Ass	50	.....	3.50	17.00
50	50	Do. 6pc 28 Stb. Ass	50	.....	3	16.00
50	50	Do 4pc Mixed Ass	50	.....	2	14.00
55	55	Hung. '24 Ass	55	.....	2.75	13.57
128	120⅜	Hydro Quebec 15pc 2011	125⅜	+⅛	12.89	11.87

Continued on next page

APPOINTMENTS

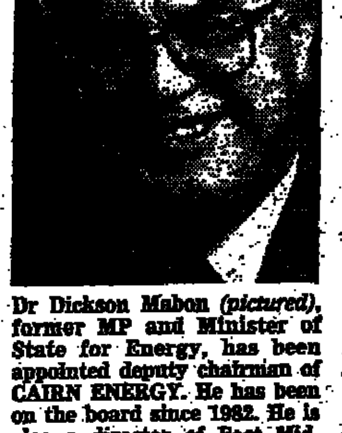
Daiwa makes changes

■ Mr Minoru Mori, chairman of DAIWA EUROPE, London, is to return to Tokyo as head of Daiwa's investment trust division. A managing director of the holding company, Daiwa Securities Co, he will also assume responsibility for the new products division in Tokyo. He is to be replaced in London by Mr Katsuhiko Fujimoto, who assumes responsibility as executive area manager of Europe and the Middle East region, chairman of Daiwa Europe, chairman of Daiwa Europe NV, and chairman of Daiwa Middle East. He is managing director, international division, Daiwa Securities Co.

■ HERITAGE, housewares importer, has appointed Mr George Raynor as group finance director. He takes over from Mr Mark Merrill, and will be based in London. Mr Raynor has been finance director of GTE Rotaflex, and of Powerson Holdings.

■ Fidelity Institutional Asset Management, a new division of FIDELITY INTERNATIONAL, has appointed Mr Alan Ainsworth as chief executive officer, Mr Bruce Johnstone as chief investment officer, and Mr Graham Nutter as chairman. Mr Michael Wrobel will head Fidelity Pensions Management as managing director. He was joint managing director.

■ Ms Gill Saunders has been appointed finance director of the Wedgwood division of WATERFORD WEDGWOOD. She joined the group in 1989. Mr Peter Brown has been promoted to finance director of the company's Johnson Brothers division. He was financial controller.



Dr Dickson Mabon *(pictured)*, former MP and Minister of State for Energy, has been appointed deputy chairman of CAIRN ENERGY. He has been on the board since 1982. He is also a director of East Midlands Electricity Generation.

■ Mr David Leggett has been appointed sales and marketing director of LEVER INDUSTRIAL, High Wycombe.

■ JAMES CHANDLER (LEWES) has appointed Mr Tim Chessells as non-executive chairman. He is chairman of the North East Thames Regional Hospital Authority, and a director of three companies.

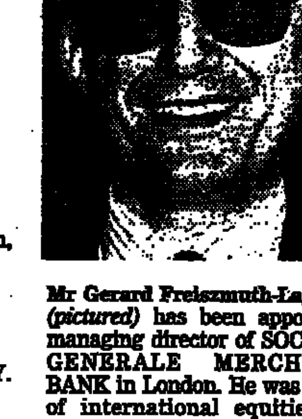
■ HAMPSON INDUSTRIES has promoted Mr J.R. Welch to company secretary. He succeeds Mr S.J. Hardie who is being promoted to finance director of one of the group's northern subsidiaries.

■ Mr Nick Roberts has been appointed associate director of CHRISTIE & CO. He is in the corporate and acquisition division, responsible for brewery and corporate pub disposals in the south of England.

■ Mr Alastair Dacre Lacy, a director of Turriff Corporation, and chairman and managing director of Technicare International, has been appointed a director of the LONDON CHAMBER OF COMMERCE AND INDUSTRY. Mr Robin Booth, who joined the Chamber last July as general manager (finance and administration) and company secretary, has also been appointed a director. Before he joined he was group secretary of Rea Brothers and a director of Stocklake Holdings, an international trading company closely associated with the bank.

■ Mr. H.A. Vice, a non-executive director, has been appointed deputy chairman of BOWTHORPE HOLDINGS. He succeeds Mr. E.B.M. Grubb who has retired.

Societe Generale senior moves



Mr Gerard Freiszmuth-Lagnier *(pictured)* has been appointed managing director of SOCIETE GENERALE MERCHANT BANK in London. He was head of international equities in Societe Generale's capital markets division, and succeeds Mr Phillipe Collas who returns to Paris to become director of the group's human resources division.

■ DAVIES ARNOLD COOPER, City solicitors, has appointed Mr Andrew Priest as financial director. He was finance director of National Opinion Polls, which was recently acquired by MAI.

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AMERICANS

[illegible]

For Greyhound Dial Corp. see Dial Corp.

CANADIANS

[illegible]

BANKS, HP & LEASING

[illegible]

Hire Purchase, Leasing, etc.

[illegible]

BEERS, WINES & SPIRITS

[illegible]

BUILDING, TIMBER, ROADS

[illegible]

BUILDING, TIMBER, ROADS – Contd

[illegible]

CHEMICALS, PLASTICS

[illegible]

DRAPERY AND STORES

[illegible]

DRAPERY AND STORES – Contd

[illegible]

ELECTRICALS

[illegible]

ELECTRICITY

[illegible]

ENGINEERING

[illegible]

FOOD, GROCERIES, ETC

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

INDUSTRIALS (Miscel.) – Contd

[illegible]

INDUSTRIALS (Miscel.) – Contd

[illegible]

INSURANCES

[illegible]

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PROPERTY

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TOBACCOS

TRANSPORT

TRANSPORT—Contd

INVESTMENT TRUST

INVESTMENT TRUST—Contd

Net asset values supplied by County NatWest Wood Mackenzie

FINANCE, LAND, ETC

WATER

OIL AND GAS

PLANTATIONS

Rubbers, Palm Oil

Teas

MINES

Central Rand

Eastern Rand

Far West Rand

O.F.S.

Diamond and Platinum

Central African

Finance

Australians

MINES—Contd

Tins

Miscellaneous

NOTES

Stock Exchange dealing classifications are indicated to the right of security names: α Alpha refers to shares traded through SEAQ by at least two marketmakers and with a normal market size of 2,000 or more, based on experience of how many of its shares are traded in the typical deal. β Beta refers to all other shares γ Gamma refers to other traded instruments.

Highs and lows are based on intra-day mid prices. Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 25 per cent and allow for value of declared distribution and rights.

Estimated Net Asset Values (NAVs) are shown for Investment Trusts, in pence per share, along with the percentage discounts (Dis) or premiums (Pm -) to the current pre-closing share price. The NAV basis assumes prior charges at par value, convertibles converted and warrants exercised if dilution occurs.

- ● "Tap Stock"
- * Highs and lows marked thus have been adjusted to allow for rights issues for cash
- † Interim since increased or resumed
- ‡ Interim since reduced, passed or deferred
- ‡‡ Tax-free to non-residents on application
- ◆ Figures or report awaited
- ♥ Not officially UK listed; dealings permitted under rule 535(4)(a)
- ♣ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- ‡‡ Not officially listed.
- ¢ Price at time of suspension
- ¶ Indicated dividend after pending scrip and/or rights issue; cover relates to previous dividend or forecast.
- ♦ Merger bid or reorganisation in progress
- ♠ Not comparable
- ♠ Same interim; reduced final and/or reduced earnings indicated
- § Forecast dividend; cover based on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ☆ Cover does not allow for shares which may also rank for dividend at a future date. No P/E usually provided
- ‖ No par value

B.Fr. Belgian Francs. Fr. French Francs ¶¶ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Annualised dividend. b Figures based on prospectus or other official estimates. c Cents d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast, or estimated annualised dividend rate, cover based on previous year's earnings. v Subject to local tax. x Dividend cover in excess of 100 times. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1990-91. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1991. K Dividend and yield based on prospectus or other official estimates for 1990. L Estimated annualised dividend, cover and P/E based on latest annual earnings. M Dividend and yield based on prospectus or other official estimates for 1991-92 N Dividend and yield based on prospectus or other official estimates for 1989-90. P Figures based on prospectus or other official estimates for 1991. Q Gross. R Forecast annualised dividend, cover and p/e based on prospectus or other official estimates. T Figures assumed. W Pro forma figures. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

REGIONAL & IRISH STOCKS

The following is a selection of Regional and Irish stocks, the latter being quoted in Irish currency.

Craig & Rose £1	650	......
Finlay Pkg. 5p	29	......
Holt (Jos) 25p	1825	......

Helton Hldgs.	43	...
IRG	145	......
United Drug	160	...

IRISH

Cap. 8½% Ln. 1991	£99¼	......
9pc Cap Ln. 1996	£98½	+⅛
Fin. 13% 97/02	£114¾	......
Arnotts	160¼	......

TRADITIONAL OPTIONS

3-month call rates

Industrials

	p
Allied-Lyons	46
Amstrad	7
Astec (BSR)	6
BAT	60
BOC Grp.	31
BTR	33
Barclays	38
Blue Circle	24
Boots	30
Bowaters	53
Brit Aerospace	56
British Steel	12
Brit. Telecom	29
Cadburys	33
Charter Cons.	45
Comm Union	44
Courtaulds	32
Eurotunnel	58
FKI	6
FNFC	20
Gen Accident	48
GEC	17
Glaxo	80
Grand Met	62
Guardian	19
GKN	31
Hanson	19
Hawker Sidd.	39
ICI	80
Ladbroke	22
Legal & Gen	36
Lex Service	20
Lloyds Bank	30
Lucas Inds.	13
Marks & Spencer	21
Midland Bk	18
Nat West Bk.	27
P & O Dfd	51
Racal Elect.	16
RHM	28
Rank Org Ord.	63
Ratners	17
Reed Intnl	36
Sears	8½
SmKl. Beecham A	58
TI	45
TSB	12
Tesco	21
Thorn EMI	64
Trust Houses	23
T&N	15
Unilever	60
Vickers	19
Wellcome	40

Property

Brit Land	30
Control Secs.	3
Land Securities	45
MEPC	48
Mountleigh	8½

Oils

Ariva Petlm	3
Brit Petroleum	28
Burmah Castrol	49
Conroy Petlm	10
Gaelic Res.	1
Premier	6
Shell	41
Tuskar Res.	2
Ultramar	30

Mines

Lonrho	21
RTZ	48

This service is available to companies whose shares are regularly traded in the United Kingdom for a fee of £1,150 a year for each security shown, subject to the Editor's discretion.

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AUTHORISED UNIT TRUSTS

ManuLife Management Ltd (1200)H
St George's Way, Stevenage Dealings:071-256 5858

	Init Chrge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
Growth Units	5¼	131.0	131.0	139.4	+0.8	4.06
Gilt & Fxd Int	5	141.3	141.3	148.6	-0.1	8.66
Intl Growth	5¼	147.9	149.3	158.8	+2.7	0.41
North American ♥	5¼	93.97	95.22	101.3	+2.55	0.32
Far East	5¼	121.0	122.1	129.9	+2.1	0.33
UK Smaller Cos	5¼	107.6	112.9	120.2	-0.2	2.94
European	5¼	52.86	52.86	56.34	+0.08	1.23
Japanese Growth	5¼	38.25	38.25	41.07	+0.42	0.00
Managed P'folio	5¼	48.42	48.70	51.81	+0.29	1.71
High Income	5¼	148.6	150.5	160.1	+0.3	6.10
High Yielding Gilt	5¼	60.75	60.75	64.04	-0.01	9.60
Cash		50.64	50.64	50.64	+0.01	11.32

US Eq Ind Tracker Inc	5	139.5	139.5	149.3	+3.0	2.99
US Eq Ind Tracker Acc	5	144.0	144.0	154.1	+3.1	2.99
Japan Tracker	5	63.68	63.68	67.54	+0.38	0.00
Asian Trader	5¼	87.53	87.53	93.60	+2.39	1.40
Managed Inc	5¼	98.34	98.34	105.7	+0.2	2.02
Managed Acc	5¼	99.58	99.58	107.0	+0.2	2.02
Cash Inc	0	100.32	100.32	100.32	+0.07	12.49
Cash Acc	0	107.91	107.91	107.91	+0.08	12.49
Europa	5½	103.7	103.7	111.5	-0.1	0.00

Geoffrey Morley Unit Mgrs Ltd (1200)F
3 Bedford Park, Croydon CR0 2AQ 081-686 9818

	Init Chrge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
Exempt Unit Tst	4	116.86	116.86	124.30	+0.82	2.60
Exempt Sml'r Cos	3¼	231.81	231.81	250.93	-0.03	1.40

Guide to pricing of Authorised Unit Trusts

Compiled with the assistance of Lautro §§

INITIAL CHARGE: Charge made on sale of units. Used to defray marketing and administrative costs, including commission paid to intermediaries. This charge is included in the price of units.

OFFER PRICE: Also called issue price. The price at which units are bought by investors.

BID PRICE: Also called redemption price. The price at which units are sold back by investors.

CANCELLATION PRICE: The minimum redemption price. The maximum spread between the offer and bid prices is determined by a formula laid down by the government. In practice, most unit trust managers quote a much narrower spread. As a result, the bid price is often set above the cancellation price. However, the bid price might be moved to the cancellation price by the managers at any time, usually in circumstances in which there is a large excess of sellers of units over buyers.

TIME: The time shown alongside the fund manager's name is the time of the unit trust's valuation point unless another time is indicated by the symbol alongside the individual unit trust name. The symbols are as follows: (♥) - 0001 to 1100 hours; (♦) - 1101 to 1400 hours; (♠) - 1401 to 1700 hours; (♣) - 1701 to midnight. Daily dealing prices are set on the basis of the valuation point; a short period of time may elapse before prices become available.

HISTORIC PRICING: The letter H denotes that the managers will normally deal on the price set on the most recent valuation. The prices shown are the latest available before publication and may not be the current dealing levels because of an intervening portfolio revaluation or a switch to a forward pricing basis. The managers must deal at a forward price on request, and may move to forward pricing at any time.

FORWARD PRICING: The letter F denotes that the managers deal at the price to be set on the next valuation. Investors can be given no definite price in advance of the purchase or sale being carried out. The prices appearing in the newspaper are the most recent provided by the managers.

SCHEME PARTICULARS AND REPORTS: The most recent report and scheme particulars can be obtained free of charge from fund managers.

Other explanatory notes are contained in the last column of the FT Managed Funds Service.

§§ Life Assurance and Unit Trust Regulatory Organisation, Centre Point, 103 New Oxford Street, London WC1A 1QH Tel: 071-379-0444.

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Stewart Ivory Unit Tst Mgrs Ltd (1500)H
45 Charlotte Sq, Edinburgh 031-226 3271

	Init Chrge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
American	5	290.0	290.0	309.9	+4.5	0.39
(Accum Units)	5	339.3	339.3	362.5	+5.2	1.39
British	5	786.9	786.9	832.9	+1.4	5.78
(Accum Units)	5	1259.8	1259.8	1332.8	+2.3	5.78
European	5	329.5	329.5	351.4	-0.4	1.51
(Accum Units)	5	353.2	353.2	376.7	-0.4	1.51
Japan	5	120.0	120.0	127.5	+0.8	-
(Accum Units)	5	120.9	120.9	128.5	+0.8	-
New Pacific	5	172.7	172.7	183.7	+4.5	2.06
(Accum Units)	5	174.0	174.0	185.1	+4.5	2.06
PEP	5	131.6	133.7	141.5	+1.9	3.57
Mngd Equity	5	118.5	120.4	127.4	....	3.66
Mngd Equity Acc	5	122.6	124.6	131.8	....	3.66
Mngd Cash	5	96.52	96.52	101.3	+0.1	11.02
(Accum Units)	5	111.8	111.8	117.4	+0.2	11.02
Mngd Fixed Int Acc	5	118.2	118.2	125.2	....	6.66
Majority SUg	1	100.44	100.44	101.43	+0.06	11.51
Majority SUg Acc	1	103.25	103.25	104.27	+0.06	11.61

Storebrand Intl Inv Mngrs Ltd (1200)F
Admin: 5 Rayleigh Rd, Hutton, Brentwood, Essex
Enquiries: 0277 227300 Dealing: 0277 261010

International May 15	0	49.98	49.98	50.38	....	3.43

Sun Alliance Unit Tst Mngmt Ltd (1200)F
Sun Alliance House, Horsham 0403 56293

Equity	6	582.4	590.5	631.6	+2.5	3.48
North American	6	75.62	75.62	80.88	+1.69	1.06
Far East	6	96.06	97.33	104.1	+2.3	0.80
W'wide Bond	6	46.07	46.07xd	48.99	+0.71	6.13
W'wide Financial	6	34.51	34.51	36.91	+0.11	3.61
W'wide Technology	6	41.02	41.02	43.87	+0.20	0.96
European	6	65.78	65.78	70.35	-0.07	1.35
Equity Income	6	69.49	69.69	74.53	+0.26	5.46
Portfolio	6	57.48	57.48xd	61.48	+0.54	3.03

Sun Life of Canada Unit Mgrs Ltd (1800)H
Basingview, Basingstoke, Hants 0800 525725

American Growth	6	25.05	25.05	26.80	+0.54	0.62
Managed Assets	6	102.99	102.99	109.73	-0.08	4.35
UK Income	6	33.70	34.25	36.64	-0.11	4.91
UK Growth	6	32.54	32.99	35.29	-0.11	3.62
Worldwide Growth	6	23.80	23.80xd	25.46	+0.19	2.31

Sun Life Trust Mngmt Ltd (1200)H

Edinburgh Fund Mngrs PLC
Exempt Funds

	Bid Price	Offer Price	+ or -	Yield Gross
American May 15	154.1	158.3	-1.4	1.58
Managed May 15	141.6	146.9	-1.5	3.91
Japan May 16	120.2	123.6	-3.3	0.08
Sm Jap Cos May 17	572.7	588.4	-34.4	0.08

Fidelity Investment Services Ltd

Mngd Pens P'folio	128.6	133.0	+0.20	3.85

Robert Fleming Asset Mngmt Ltd

Am Exempt	£454.32	462.12	+8.23	1.72
Gen Exempt	£128.61	131.72	-0.43	3.90
Jap Exempt	£489.18	498.73	+4.62	1.12
Pacific Exempt	£98.86	100.89	+1.16	2.43
Cont'l Euro Exempt	£96.41	98.29	-0.40	2.36
Indexed Exempt May 16	£125.21	128.33	----	3.07
Amer Index'd Exmt May 16	£97.62	98.60	----	3.84
Japan Indxd Exmt May 16	£66.30	67.62	----	0.72
Euro Indexd Exmt May 16	£95.28	97.15	----	2.89
P'fic Indxd Exmt May 16	£96.83	98.979	----	2.22

Funds in Court*

Capital May 1	503.22	506.92xd	----	2.42
Gross May 1	190.86	192.40	----	9.62
High Yield May 1	297.94	300.35	----	6.98

* Restricted to monies under Court control

Henderson Unit Trust Management Ltd

Pensions Mngd	51.37	52.44xd	+0.24	3.81

INVESCO MIM Management Ltd
Exempt Funds

Intl Mngd P'folio	1203.0	1248.0	----	-
Mngd Pens (Acc)	67.70	72.20	----	-

Lazard Brothers & Co. Ltd

Property Jan 3	£2560.0	2675.0	----	6.00
Inc Gth Prp Apr 16	£1525.0	1460.0	----	7.20

Lazard Investors Ltd
Exempt Funds

Small Co's May 16	£3656.2	3824.9	----	4.36

Assicurazioni GENERALI SpA
117 Fenchurch St, London EC3M 5DY 071-488 0733

	Bid Price	Offer Price	+ or -	Yield Gross
Generali UK Gth	142.1	149.6	....	-
Generali Ppty	142.7	150.3	....	-
Canadian	104.9	110.5	....	-
Equity Inc	136.0	143.2	....	-
European	190.6	198.6	....	-
High Income	151.4	159.4	....	-
Jap & Far East	140.1	147.5	....	-
Nth American	158.6	167.0	....	-
Scandinavian	163.5	172.2	....	-

Legal & General (Unit Pensions) Ltd
Kingswood House, Kingswood, Tadworth, Surrey 0737 370370

	Bid Price	Offer Price	+ or -	Yield Gross
Ex Bldg Soc Linkd	153.6	161.7	+0.2	-
Do. Accum	191.0	201.1	+0.2	-
Exempt Cash Init	274.5	289.0	+0.3	-
Do. Accum	430.4	453.1	+0.4	-
Exempt Eqty Init	841.7	886.0	+4.3	-
Do. Accum	1319.7	1389.2	+6.7	-
Exempt Euro Init	166.7	175.5		-
Do. Accum	201.1	211.7	+0.1	-

Merchant Investors Assurance Co Ltd – Contd.

	Bid Price	Offer Price	+ or -	Yield Gross
MI Baring Eastern	149.9	157.7	+3.0	-
MI Fidelity Fd	146.5	154.2	+0.7	-
MI Fid American	146.7	154.4	+1.8	-
MI Fid European	204.2	214.9	+6.4	-
MI Fid Int Spec Sits	184.2	193.8	+0.6	-
MI Fid Japan	134.0	141.0	+0.8	-
MI Fid Pacific	167.0	175.7	+1.7	-
MI Fidelity UK	150.3	158.2	-0.3	-
MI Fram Inc & Growth	196.8	[illegible]		-

INSURANCES

OTHER UK UNIT TRUSTS

Continued on next page

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	Bid Price	Offer Price	+ or -	Yield Gross
N & P Life Assurance Ltd				
6-7 Bedford Row, London WC1R 4UJ 071-430 2348				
Life Managed Fd	104.6	110.1	+0.7	-
Pension Managed Fd	101 8	107 1	+0 1	-
Life Deposit Fd	106 8	112.4	+0.1	-
Pension Deposit Fd	111 8	117.6	+0 1	-
National Financial Management Corp PLC				
72 Gatehouse Rd, Aylesbury, HP19 3XJ 0296 395539				
Life Funds				
Managed Cautionary	108 2	119.1	-0.5	-
Managed Growth	134 7	148.2	-	-
Managed Opportunity	136 4	150 4	+0.4	-
NFMC Target Financial	99 4	106.9	-0.5	-
Pension Funds				
Managed Cautionary	118 4	129 5	-0.4	-
Managed Growth	142.2	156.3	+0.1	-
Managed Opportunity	137.0	150 8	+0 4	-
NFMC Target Mngd Pens	1473.8	1602.0	+4 1	-
National Mutual Life				
The Priory, Priory Pk, Hitchin, SG5 2DW 0462 422422				
Harvester Pension Funds				
Managed	159.7	168.2	-	-
UK Equity	166 6	175 4	-	-
Overseas Equity	134.5	141.6	-	-
Fixed Interest	143 0	150 6	-	-
Property	129 8	136 7	-	-
Index Linked	147 9	155 7	-	-
Deposit	155.5	163.7	-	-
With Profits (B)	127 8	134 5	-	-
National Provident Institution				
48 Gracechurch St, London EC3P 3HH 071-623 4200				
Managed	348.1	366.5	+1.2	-
UK Equity	436.5	459.5	+1 0	-
Overseas Eq	345.7	363 9	+1 7	-
America	280 6	295 4	+5.0	-
Far East	379 3	399.3	+4 9	-
Property	194 0	204.3	-	-
Fixed Int	256 7	269 2	-0.1	-
Indexed Gilt	154 4	162.6	-0 1	-
Deposit	180 8	190 4	+0 2	-
Pension Fund (Accum Units)				
Managed	491.9	517 8	+2.1	-

	Bid Price	Offer Price	+ or -	Yield Gross
Prosperity Life Assurance Ltd				
1 Sessions Hse Sq, Maidstone ME14 1XX 0622 690555				
Initial Equity	151.5	160.0	-	-
Accum Equity	216 0	228.0	-	-
Accum Managed	224 5	236.5	-	-
Accum Free Star	168.5	178 0	-	-
Accum World	121.5	128.5	-	-
Accum Lifetime	109 6	109.6	-	-
Pens Acc Equity	233.0	245.3	-	-
Pens Acc Managed	280.0	295 0	-	-
Pens Acc Intl	211.5	223.0	-	-
Pens Acc Deposit	197 5	208.5	-	-
Pen. Acc Free Star	184 5	195.0	-	-
Providence Capital Life Assc. Co Ltd				
2 Bartley Way, Hook, Hants RG27 9XA 0256 768888				
UK Equity Acc	224.8	237 2	+0 7	-
UK Fixed Int Acc	171.3	180.8	+0.1	-
Intl Equities Acc	179.4	189.3	+1.6	-
UK Managed Acc	173 0	182.4	+0.3	-
Property Acc	225 5	237.9	-	-
Money Acc	128.5	135 6	+0.1	-
Special Market Acc	142.3	150 2	+2.5	-
Japan Equity Acc	106.4	112.3	+1 4	-
North American Acc	105 2	111.0	+2.8	-
Pacific Acc	98 7	104 2	+1.8	-
Technology Acc	125 0	131.9	+3.5	-
Nat Resources Acc	56.3	59 4	+0 5	-
European Acc	101 7	107.3	-0 5	-
Residential Prop Acc	96.3	101 6	-	-
Swiss Equities Acc	35 4	37 4	-0 1	-
Hong Kong Acc	67.5	71.3	+2.1	-
UK High Inc Eq Acc	73.4	77.5	-0.3	-
Int Fixed Interest Acc	56.2	59.3	+0.1	-
Int Managed Acc	57 2	60.2	+0.3	-
HIP Managed Acc	114 8	121 0	+0.3	-
HIP Managed II Acc	100.3	105 8	+0.7	-
HIP Managed III Acc	106 6	112.4	+0 7	-
Total Investment Bond				
UK Equity Initial		153.2	+0.4	-
UK Fixed Int Initial		117 0	+0.1	-
Intl Equities Initial		121.6	+1.1	-
UK Managed Initial		118.1	+0 2	-
Property Initial		155 0	-	-
Money Initial		88.2	+0.1	-
Special Market Initial		110 8	+1.6	-

Royal Heritage Life Assurance Ltd—Contd.

Shield Assurance Ltd

Swiss Life (UK) PLC

CMI Insurance Co Ltd—Contd.

James Campbell Financial Services

Chase de Vere PLC

ECU Futures Plc

Hambros Fd Mgrs (CI) Ltd-

OFFSHORE INSURANCES

OFFSHORE AND OVERSEAS

BERMUDA (SIB RECOGNISED)

CANADA (SIB RECOGNISED)

GUERNSEY (SIB RECOGNISED)

GUERNSEY (REGULATED)

MANAGEMENT SERVICES

هكذا من الأصل

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U.S. Treasury Securities Fund Ltd

Yamaichi Capital Mgmt (Guernsey) Ltd

IRELAND (SIB RECOGNISED)

GAM Fund Management Ltd (a)

MI Global Asset Mngmt Co Ltd

IRELAND (REGULATED)

Bank of Ireland Unit Managers Ltd

Baring International Fd Mngrs (Ireland) Ltd

ISLE OF MAN (SIB RECOGNISED)

Allied Dunbar Intl Fund Mgrs (IOM)

Amsel Global Funds Ltd

Equity & Law Intl Fund Mngrs Ltd

Gartmore Fund Managers (IoM)

Guernsey Fund Managers Intl Ltd

Sun Life Management (IoM) Ltd

ISLE OF MAN (REGULATED)

John Govett Management (IoM) Ltd

JERSEY (SIB RECOGNISED)

AIB Fund Managers (CI) Ltd

Barclays International Funds

Capital House Fund Mgrs (CI) Ltd

Gartmore Fund Managers International Ltd

John Govett (Channel Islands) Ltd (1000)F

Hill Samuel Fund Mgrs (Jsy) Ltd (1000)F

Hill Samuel Fund Mgrs—Contd.

INVESCO MIM International (Jersey) Ltd

Lloyds Bank CI U/T Mgrs.

Midland Bank Fund Managers (Jersey) Ltd

Royal Trust Jsy Fd Mngt Ltd (1000)F

TSB Trust Funds (CI)

JERSEY (REGULATED)

Barclays Intl Funds

Brown Shipley Fund Mgmt (CI) Ltd

Citibank (CI) Ltd

EBC Trust Company (Jersey) Ltd

Equitilink International Mngt Ltd

Fidelity Investments (CI) Ltd

Fleming Group

Foreign & Colonial Mgmt (Jersey) Ltd

John Govett Management (Jersey) Ltd

Holborn Fund Management (Jersey) Ltd

INVESCO MIM International Limited

Management International (Jersey) Ltd

Morgan Grenfell Guernsey Mgmt (Jersey) Ltd

Perpetual UT Mngrs (Jersey) Ltd

Royal Trust Intl Fd Mngt Ltd

Schroder Mngt Services (Jersey) Ltd

Scimitar Worldwide Mngrs Fund Ltd

Scimitar Worldwide Selection Fd Ltd

TSB Trust Funds (CI)

Tyndall International (Jersey) Ltd

Warburg Asset Management Jersey Ltd

Wardley Fund Managers (Jersey) Ltd

Worldinvest (Managed) Jersey Ltd

LUXEMBOURG (SIB RECOGNISED)

Abbey Global Investment Fund (a)

Allianz Federated Intl Mngrs (Lux) SA (a)

Barclays Intl Funds (Luxembourg) (1000)

Cresvale Asset Advisors (Lux) SA (a)

Dresdnerbank Asset Mngmt SA (a)

Eagle Star Global Assets Fund (a)

Fidelity Funds (a)

Fleming Group (a)

Gartmore Indosuez Funds

Gartmore Luxembourg SA (a)

Henderson Management SA (a)

Hill Samuel Inv Services Intl SA (a)

Hypo Foreign & Colonial Port Fd Sicavla

INVESCO MIM International Limited (a)

Ivory & Sime (Luxembourg) SA (a)

Kleinwort Benson Select Fund (a)

Liberty ALL-STAR World Pfolio Eqty Fd (a)

Lloyds Bank Luxembourg

Midland International Circuit Fund SICAV(a)

Morgan Grenfell UT Mgrs/Deutsche Bk (a)

Morgan Stanley Sicav

Nomura Global Fund (a)

Schroder International Selection Fd (a)

S.G. Warburg Asset Mngt Lux SA (a)

Smith New Court Global Strategy SICAV

Tyndall Global Fund SICAV

Wardley Investment Services (Lux) SA (a)

LUXEMBOURG (REGULATED)

Alliance Capital

Asian Development Equity Fund

Banque Paribas Luxembourg

Rothschild

CR Fund International (a)

CAI Investment Serial Funds

Capel-Cure Myers Intnl Fd Sicav (a)

Cedevalor (a)

Cortexa International (a)

Credit Commercial de France

Credit Suisse

Daiwa Japan Gem Fund

Daiwa Japan Small Equity Fd (a)

Dean Witter World Wide Invst. Tst SA

The Dragon Fund Sicav

Dresdnerbank Asset Management SA (a)

Espirito Santo Investment Mngmt (SICAV)

Eurosu Management S.A.

Europa Plus Investment (SICAV) (a)

Europe Value Fund (a)

Fidelity Intl Inv Mngt (Luxembourg) SA

Fidelity Investment (CI) Ltd

Fidelity International Group NV

Five Arrows Intl Bond Fund (a)

Fleming Group

Gartmore Luxembourg SA

Gota Global Selection (a)

International Bond Trust

International Specialty Fund (a)

INVESCO MIM International Limited

Investissements Atlantiques SICAV

JC Global Fund—SICAV

Latin American Management Co Ltd (a)

Leuvest Intl Fds-Global Pf'olio FCP (a)

Lloyds Bank Luxembourg

Mediterranee Fund (SICAV) (a)

Merrill Lynch Asset Management

Morgan Stanley Sicav

Murray International Sicav

NM Income & Gwth Fd

Nikko Bank (Luxembourg) S.A.

Nomura Asia Europe Fund

Nomura Asian Infrastructure Fd SICAV

Nomura Dragon Global Fund

Nomura Prudential Fd Pt II

Nomura Prudential Global Portfolio

Rosenberg Alpha Fund Mark II

Rosenberg Global Mngt Co SA (a)

Rosenberg Management SA (a)

Rosenberg US Japan Mngmt Co SA (a)

SCI/TECH SA

Standfond

Target International Fountain Fund

Target International Ltd

Templeton Worldwide Investments

Tea Brand Fund Ltd—SICAV (a)

Transworld Bond Trust

US Pacific Stock Fund (a)

Unifonds SA

Union Financial Services SA Lux

Viking Fund SICAV

"WINTERTHUR" Fund Mngmt Co (Lux) SA

World Bond Fund-SICAV (a)

World Capital Gwth Fd-SICAV (a)

Yamaichi Advanced Technology Fd

Yamaichi 1992 OMNI Fund SICAV (a)

SWITZERLAND (SIB RECOGNISED)

B.I.A. Bond Investments AG

OTHER OFFSHORE FUNDS

ATSP Management Ltd

Aberdeen Fund Managers (Gsy) Ltd

Adig Investment

Asia Malaysian Growth Fd (Cayman) Ltd

Arral Associates Ltd

Asian Convertibles & Income Fd (Cayman)

Austro-Hungary Fund Ltd

Julius Baer Bank & Trust Co Ltd

Baring International Fund Mgrs (Bermuda)

Bridge Management Ltd

Brinson Management

CDC International

Commerzbank Intnl Growth Fund

Credit Lyonnais Intl Asset Mngt (HK) Ltd

Daiwa Japanese Equity Warrant Fund

Dunbar Investment Trust Co Ltd

East Asia Fund

Emerging Markets Management

Farmoza Fund

Frankfurt Trust Investment-GmbH

Free World Fund

The French Prestige Fund

Frontier Fund Limited

Futures Fund Mngmt Ltd

GT Chile Growth Fund Ltd

GT European Warrant Fd Mngrs (Lux) SA

GT Management Plc

GW Investment Mngmt Ltd

Gaia Currency Funds

Gartmore Investment Ltd

Global Asset Management

Global Government Plus Fund

Granville Management Limited

Group One Ltd

Group One International Tst

Hambros Bank Management Ltd

Hill Samuel Investment Services Intl (a)

Indosuez Management

Intermarket Fund

The Japan Capital Secured Trust

Jardine Fleming Inv Mngt Ltd

Kestrel Management Ltd

Korea Investment Trust Co Ltd

Lehman Brothers Sports Growth Fund

Lloyds Bank (CI) U/T Mngrs

Lloyds Bank Group Switzerland

London & Bishopsgate International

London Portfolio Services plc

Malaysia Capital Fund

Malaysia Growth Fund

Malaysian Smaller Co's Fd (Cayman) Ltd

Matterhorn Fund

Meridian Funds

Merrill Lynch Guernsey

Morgan Stanley Japanese Warrant Fund NV

NM Financial Mngt Intl Ltd

The New Zealand Fund

Newport International Management

Nomura Warrant Fund 1990 Ltd

North Star Fund Managers (Cayman) Ltd

Northfield International Ltd

Optima Group

Orbitex Investment Management Ltd

Orbitex Bahamas Ltd

ORIENT Growth Fd

PAM Futures Trading (Cayman) Ltd

PFC International Portfolio Fd Mngt Ltd

PRS International

Pacific Growth Fund

Pierson Heldring & Pierson

Portuguese Investment Fund Ltd

Prospect H J Port N.V.

Putnam International Advisors Ltd

Pyrford Investment Mngt SA Switz

Quantum Fund N.V. Curacao

Quasar Fund NV Curacao

Quilter International Management Ltd

Real Estate Strategies Ltd

Rothschild Asset Management (CI)

NM Rothschild Asset Mngmt Limited

Royal Trust North American Bond Fd

Sabre Fund Mngt Ltd

Safra Republic Holdings

Schroder Investment Management Limited

Schroder Japanese Warrant Fund

Schroders Asia Limited

Schroders Australia Ltd

Scudder, Stevens & Clark Inc

Sequoia Securities (Bermuda) Ltd

Shinyei International Mngmt (Bermuda) Ltd

Siam Smaller Companies Fund Ltd

Singer & Friedlander Ldn. Agents

Societe Generale Merchant Bank plc

Sofitri Asset Management Inc

Sovereign Portfolio Management

Sterling Offshore Fund Admin. Ltd

Taiwan Fund Management Ltd

Taipei Fund

Templeton Global Strategy Services

The Thai Development Capital Fd

The Thai-Euro Fund Ltd

The Thai Prime Fund Limited

The Thailand Fund

The Thailand Growth Fund

The Thailand Intl Fund Ltd

T. Rowe Price Associates, Inc.

Thornton Investment Management Ltd

Three-Way Asset Allocation Funds

Tudor BVI Futures Ltd

Tudor G-5 Ltd

Tudor G-5 Unit Trust (Japan)

Tyndall International (Bermuda) Ltd

Warburg Inv Mngmt (Isle of Man) Ltd

Wardley Investment Services Ltd

Wellington Fd Mngt (Bermuda) Ltd

Wells Fargo U.S. IT Fund

Xiehlas International Investment Fd Ltd

MANAGED FUNDS NOTES

[illegible]

CURRENCIES, MONEY AND CAPITAL MARKETS

FOREIGN EXCHANGES

Dollar down in thin trading

THE DOLLAR lost ground in *thin trading, with many European* centres closed for the Whitsun holiday. Lack of fresh economic news left the dollar to drift lower in a corrective reaction to Friday's upward move.

The US Federal Reserve and the German Bundesbank were reported to have sold dollars last Friday in New York, as the currency rose sharply to a high of around DM1.76, on the delinkage of the Swedish krona from a basket of currencies in which the dollar had a 21 per cent weighting.

Interest rate differentials *had* favoured the krona against the dollar in this basket, encouraging operators to borrow the US currency and lend krona. *This* created short dollar positions, which had to be covered on Friday as a result of Sweden's decision to link the krona to the Ecu.

The levels touched in New York on Friday suggested that this process was overdone however, leading to yesterday's reversal.

But dealers in Tokyo were not convinced that the situation would be unravelled without a further rise in the dollar's value. In the Far East it finished at DM1.7560 and Y138.85, amid speculation that squaring of positions involving an Ecu linked currency would hit the D-Mark, because of the *high level of liquidity in the* German unit.

Japanese traders estimated that this could lead to extra demand of around $10-20bn for the dollar.

In quiet trading the US currency fell to DM1.7280 from DM1.7360 at the London close. It also declined to Y138.20 from Y138.45; to FFr5.8625 from *FFr5.8700; and to SFr1.4580* from SFr1.4670. The dollar's index rose to 66.4 for 66.3.

The D-Mark finished little changed against the Japanese yen, after suffering some weakness in Tokyo cross trading as traders hedged short dollar positions against European currencies. It closed in London at Y79.95 compared with Y79.75 *on Friday, improving from the* level of around Y79.00 at the Tokyo close.

There was some speculation *that* the Bank of Japan may soon cut its discount rate but yesterday's action by the *central bank, draining liquidity* from the Tokyo money market, gave no encouragement to this view.

The closure of many European centres left foreign exchange trading thin and volatile. There were no official figures on the European exchange rate mechanism from the European Commission, but *unofficial data pointed to a* strengthening of currencies where the main trading centre was closed. Milan and London were open, and the lira and sterling fell from second and third strongest in the ERM, to be relaced by the Belgian franc and Danish krone.

In London sterling rose ¼ cent to $1.7190, but fell to *DM2.9700 from DM2.9800; to* SFr2.5075 from SFr2.5175; and to Y237.50 from Y237.75, but rose to FFr10.0775 from *FFr10.0750. The* pound's index lost 0.1 to 91.7.

EMS EUROPEAN CURRENCY UNIT RATES

	Ecu Central Rates	Currency Amounts Against Ecu May 17	% Change from Central Rate	% Spread vs Weakest Currency	Divergence Indicator
Spanish Peseta	133.631	127.438	-4.63	6.16	81
Italian Lira	1538.24	1532.60	-0.37	1.62	25
Sterling	0.696904	0.694351	-0.37	1.62	6
Belgian Franc	42.4032	42.3300	-0.17	1.42	16
Dutch Guilder	2.31643	2.31832	0.08	1.16	3
D-Mark	2.05586	2.05776	0.09	1.15	4
Irish Punt	0.767417	0.768668	0.16	1.08	-1
Danish Krone	7.84195	7.86263	0.26	0.98	-5
French Franc	6.89509	6.98081	1.24	0.00	-60

Ecu central rates set by the European Commission. Currencies are in descending relative strength. Percentage changes are for Ecu, a positive change denotes a weak currency. Divergence shows the ratio between two spreads: the percentage difference between the actual market and Ecu central rates for a currency, and the maximum permitted percentage deviation of the currency's market rate from its Ecu central rate.
Adjustment calculated by Financial Times.

£ IN NEW YORK

May.20	Latest	Previous Close
£ Spot	1.7185-1.7195	1.7105-1.7115
1 month	0.91-0.89pm	0.88-0.86pm
3 months	2.32-2.29pm	2.35-2.32pm
12 months	6.95-6.85pm	7.00-6.90pm

Forward premiums and discounts apply to the US dollar

STERLING INDEX

	May.20	Previous
8.30 am	91.6	92.0
9.00 am	91.4	92.0
10.00 am	91.5	91.9
11.00 am	91.5	91.9
Noon	91.5	92.1
1.00 pm	91.6	92.0
2.00 pm	91.8	91.9
3.00 pm	91.8	91.9
4.00 pm	91.7	91.8

CURRENCY MOVEMENTS

May 20	Bank of England Index	Morgan** Guaranty Changes %
Sterling	91.7	-20.3
U.S Dollar	66.4	-12.1
Canadian Dollar	105.5	+2.7
Austrian Schilling	108.3	+10.9
Belgian Franc	110.0	-3.0
Danish Krone	108.4	+3.0
D-Mark	116.1	+22.8
Swiss Franc	112.4	+21.4
Dutch Guilder	112.7	+14.9
French Franc	101.9	-13.9
Lira	98.5	-20.2
Yen	135.7	+67.3

Morgan Guaranty changes: average 1980-1982=100. Bank of England Index (Base Average 1985=100). **Rates are for May.17

CURRENCY RATES

May 17	Bank ‡ rate %	Special * Drawing Rights	European † Currency Unit
Sterling	-	0.774433	0.694351
U.S Dollar	6.00	1.34883	1.20796
Canadian $	9.22	1.55210	1.38952
Austrian Sch	7	16.1644	14.4798
Belgian Franc	10.50	47.2731	42.3300
Danish Krone	9½	8.78426	7.86263
D-Mark	6.50	2.29706	2.05776
Dutch Guilder	7.75	2.58867	2.31832
French Franc	10¼	7.79624	6.98081
Italian Lira	11½	1712.00	1532.60
Japanese Yen	6	185.801	166.336
Norway Krone	8	N/A	8.01328
Spanish Peseta	-	142.299	127.438
Swedish Krona	10.00	8.25147	7.38729
Swiss Franc	6.00	1.94704	1.74430
Greek Drach	19	N/A	225.104
Irish Punt	-	N/A	0.768668

‡ Bank rate refers to central bank discount rates. These are not quoted by the UK, Spain and Ireland.
† European Commission Calculations.
* All SDR rates are for May.17

OTHER CURRENCIES

May 20	£	$
Argentina	16854.6 - 16891.5	9845.00 - 9855.00
Australia	2.1975 - 2.1995	1.2810 - 1.2820
Brazil	470.55 - 471.40	274.80 - 275.10
Finland	6.9310 - 6.9695	3.9975 - 4.0005
Greece	321.60 - 328.00	189.50 - 193.30
Hong Kong	13.3445 - 13.3580	7.7895 - 7.7915
Iran	119.10*	68.00*
Korea(Sth)	1225.10 - 1244.90	722.50 - 728.30
Kuwait	N/A	N/A
Luxembourg	61.05 - 61.15	35.50 - 35.60
Malaysia	4.7340 - 4.7425	2.7635 - 2.7655
Mexico	5115.20 - 5135.40	2987.00 - 2997.00
N Zealand	2.9165 - 2.9215	1.7000 - 1.7020
Saudi Ar	6.3185 - 6.3765	3.7490 - 3.7510
Singapore	3.0275 - 3.0350	1.7715 - 1.7735
S Af (Cm)	4.8135 - 4.8250	2.8120 - 2.8135
S Af (Fn)	5.6175 - 5.7110	3.2785 - 3.3330
Taiwan	46.75 - 46.85	27.30 - 27.35
U.A.E.	6.1865 - 6.2450	3.6720 - 3.6740

* Selling rate

POUND SPOT - FORWARD AGAINST THE POUND

May 20	Day's spread	Close	One month	% p.a.	Three months	% p.a.
US	1.6915 - 1.7220	1.7185 - 1.7195	0.91-0.89cpm	6.28	2.32-2.29pm	5.36
Canada	1.9455 - 1.9815	1.9765 - 1.9775	0.54-0.44cpm	2.97	1.29-1.16pm	2.48
Netherlands	3.3390 - 3.3540	3.3400 - 3.3500	⅞-⅝cpm	2.91	2-1⅞pm	2.32
Belgium	60.90 - 61.35	61.05 - 61.15	19-13cpm	3.14	44-32pm	2.49
Denmark	11.3225 - 11.3735	11.3575 - 11.3675	2⅝-1⅞orepm	2.38	6-4⅞pm	1.91
Ireland	1.1075 - 1.1115	1.1075 - 1.1085	0.20-0.15ppm	1.90	0.50-0.40pm	1.62
Germany	2.9675 - 2.9765	2.9675 - 2.9725	⅞-⅝pfpm	3.28	1⅞-1⅝pm	2.44
Portugal	257.90 - 260.60	259.60 - 260.60	61-33cpm	2.17	26-28pm	0.42
Spain	183.45 - 184.45	183.45 - 183.75	20-25cdis	-1.47	77-88dis	-1.80
Italy	2201.55 - 2210.50	2203.75 - 2204.75	1½-½lirepm	0.54	2¼-½pm	0.25
Norway	11.5340 - 11.5870	11.5375 - 11.5475	2⅜-1⅞orepm	2.01	5-4pm	1.56
France	10.0590 - 10.1020	10.0725 - 10.0825	2⅝-2¼cpm	2.90	6¼-5⅞pm	2.41
Sweden	10.6270 - 10.6900	10.6775 - 10.6875	1⅛-⅜orepm	0.84	1⅛pm-⅜oredis	0.23
Japan	234.65 - 238.00	237.00 - 238.00	⅞-⅝ypm	4.11	2¼-2⅛pm	3.68
Austria	20.83 - 20.96	20.83 - 20.86	5⅜-4¼gropm	2.77	13¼-11⅞pm	2.34
Switzerland	2.5025 - 2.5140	2.5025 - 2.5125	⅞-⅝cpm	3.89	2-1⅞pm	3.09
Ecu	1.4425 - 1.4490	1.4425 - 1.4435	0.26-0.21cpm	1.95	0.67-0.60pm	1.76

Commercial rates taken towards the end of London trading. Six-month forward dollar 4.17-4.12cpm. 12 Month 6.95-7.05pm

DOLLAR SPOT - FORWARD AGAINST THE DOLLAR

May 20	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.6915 - 1.7220	1.7185 - 1.7195	0.91-0.89cpm	6.28	2.32-2.29pm	5.36
Ireland†	1.5215 - 1.5505	1.5495 - 1.5505	0.60-0.55cpm	4.45	1.58-1.48pm	3.95
Canada	1.1485 - 1.1505	1.1490 - 1.1500	0.30-0.34cdis	-3.34	0.82-0.87dis	-2.94
Netherlands	1.9460 - 1.9785	1.9460 - 1.9470	0.54-0.57cdis	-3.42	1.49-1.54dis	-3.11
Belgium	N/A	35.50 - 35.60	8.50-10.50cdis	-3.21	23.50-29.50dis	-2.98
Denmark	N/A	6.6075 - 6.6125	2.12-2.42oredis	-4.12	5.65-6.25dis	-3.60
Germany	1.7245 - 1.7610	1.7275 - 1.7285	0.46-0.48pfdis	-3.26	1.28-1.31dis	-3.00
Portugal	151.30 - 152.60	151.35 - 151.45	98-73cdis	-5.19	205-245dis	-5.94
Spain	107.30 - 108.75	107.35 - 107.45	64-68cdis	-7.37	172-180dis	-6.55
Italy	1279.50 - 1307.00	1282.00 - 1282.50	6.00-6.50liredis	-5.85	16.50-17.20dis	-5.26
Norway	N/A	6.7125 - 6.7175	2.25-2.65oredis	-4.38	6.40-6.90dis	-3.96
France	5.8600 - 5.9560	5.8600 - 5.8650	1.67-1.72cdis	-3.47	4.45-4.55dis	-3.07
Sweden	6.2125 - 6.3150	6.2125 - 6.2175	2.60-3.20oredis	-5.60	7.70-8.70dis	-5.28
Japan	138.00 - 138.85	138.15 - 138.25	0.23-0.25ydis	-2.08	0.58-0.61dis	-1.72
Austria	N/A	11.8975 - 11.9025	3.30-3.75grodis	-3.55	9.00-10.20dis	-3.23
Switzerland	1.4540 - 1.4815	1.4575 - 1.4585	0.29-0.31cdis	-2.47	0.81-0.84dis	-2.25
Ecu	1.1675 - 1.1910	1.1900 - 1.1910	0.42-0.40cpm	4.13	1.07-1.04pm	3.54

Commercial rates taken towards the end of London trading. † UK, Ireland and ECU are quoted in US currency. Forward premiums and discounts apply to the US dollar and not to the individual currency.

EURO-CURRENCY INTEREST RATES

May 20	Short term	7 Days notice	One Month	Three Months	Six Months	One Year
Sterling	11⅞ - 11⅝	11⅞ - 11⅝	11⅞ - 11⅝	11⅝ - 11½	11⅜ - 11¼	11¼ - 11⅛
US Dollar	5⅞ - 5¾	5⅞ - 5¾	5⅞ - 5¾	6 - 5⅞	6¼ - 6⅛	6⅝ - 6½
Can. Dollar	9 - 8¾	9 - 8¾	8⅞ - 8¾	8⅞ - 8¾	9 - 8¾	9⅛ - 8⅞
Dutch Guilder	9⅛ - 8⅞	9⅛ - 8⅞	9⅛ - 9	9¼ - 9⅛	9⅜ - 9¼	9⅜ - 9¼
Swiss Franc	8¼ - 8	8¼ - 8	8⅛ - 8	8⅛ - 8	8⅛ - 8	8⅛ - 7⅞
D-Mark	8⅞ - 8¾	8⅞ - 8¾	8⅞ - 8¾	9 - 8⅞	9⅛ - 9	9¼ - 9⅛
French Franc	9⅛ - 9	9⅛ - 9	9⅛ - 9	9⅛ - 9	9¼ - 9⅛	9⅜ - 9¼
Italian Lira	12 - 10	11½ - 10½	11⅛ - 10⅞	11⅛ - 10⅞	11¼ - 11	11⅜ - 11⅛
Belgian Franc	8⅞ - 8¾	8⅞ - 8¾	9 - 8⅞	9¼ - 9⅛	9¼ - 9⅛	9⅜ - 9¼
Yen	7⅞ - 7¾	7⅞ - 7¾	7⅞ - 7¾	7⅞ - 7¾	7⅞ - 7¾	7⅞ - 7¾
Danish Krone	10¼ - 10	10 - 9¾	9⅞ - 9¾	9⅞ - 9¾	9¾ - 9⅝	9¾ - 9⅝
Asian $Sing	6 - 5¾	6 - 5¾	6 - 5¾	6⅛ - 5⅞	6¼ - 6⅛	6⅝ - 6½

Long term Eurodollars: two years 7¼-7⅛ per cent; three years 7⅝-7½ per cent; four years 8¼-8 per cent; five years 8⅝-8½ per cent nominal. Short term rates are call for US Dollars and Japanese Yen; others, two days' notice.

EXCHANGE CROSS RATES

May.20	£	$	DM	Yen	F Fr.	S Fr.	H Fl.	Lira	C$	B Fr.	ECU
£	1	1.719	2.970	237.5	10.08	2.508	3.345	2204	1.977	61.10	1.443
$	0.582	1	1.728	138.2	5.864	1.459	1.946	1282	1.150	35.54	0.839
DM	0.337	0.579	1	79.97	3.394	0.844	1.126	742.1	0.666	20.57	0.486
YEN	4.211	7.238	12.51	1000.	42.44	10.56	14.08	9280	8.324	257.3	6.076
F Fr.	0.992	1.705	2.946	235.6	10.	2.488	3.318	2187	1.961	60.62	1.432
S Fr.	0.399	0.685	1.184	94.70	4.019	1	1.334	878.8	0.788	24.36	0.575
H Fl.	0.299	0.514	0.888	71.00	3.013	0.750	1	658.9	0.591	18.27	0.431
Lira	0.454	0.780	1.348	107.8	4.574	1.138	1.518	1000.	0.897	27.72	0.655
C$	0.506	0.869	1.502	120.1	5.099	1.269	1.692	1115	1	30.91	0.730
B Fr.	1.637	2.813	4.861	388.7	16.50	4.105	5.475	3607	3.236	100.	2.362
ECU	0.693	1.191	2.058	164.6	6.985	1.738	2.318	1527	1.370	42.34	1

Yen per 1,000: French Fr. per 10: Lira per 1,000: Belgian Fr. per 100.

FINANCIAL FUTURES AND OPTIONS

LIFFE LONG GILT FUTURES OPTIONS / LIFFE US TREASURY BOND FUTURES OPTIONS / LIFFE BUND FUTURES OPTIONS / LIFFE EUROMARK OPTIONS / LIFFE EURODOLLAR OPTIONS / LIFFE SHORT STERLING OPTIONS

[illegible]

LONDON (LIFFE): 20-YEAR 9% NOTIONAL GILT; US TREASURY BONDS 8%; 6% NOTIONAL GERMAN GOVT. BOND; 6% NOTIONAL LONG TERM JAPANESE GOVT. BOND; 9% NOTIONAL ECU BOND; THREE MONTH STERLING; THREE MONTH EURODOLLAR; THREE MONTH EUROMARK; THREE MONTH ECU; FT-SE 100 INDEX; EURO SWISS FRANC

[illegible]

CHICAGO: U.S. TREASURY BONDS (CBT) 8%; U.S. TREASURY BILLS (IMM); SWISS FRANC (IMM); JAPANESE YEN (IMM); DEUTSCHE MARK (IMM); THREE-MONTH EURODOLLAR (IMM); STANDARD & POORS 500 INDEX

[illegible]

FT-SE 100 INDEX £25 per full index point

	Prev.
Jun	2460.0
Sep	2501.0
Dec	2542.0

PHILADELPHIA SE £/$ OPTIONS £31,250 (cents per £1)

Strike Price	Calls Jun	Calls Jul	Calls Aug	Calls Sep	Puts Jun	Puts Jul	Puts Aug	Puts Sep
1.625	8.65	8.75	8.90	9.01	0.28	0.43	1.09	2.32
1.650	6.37	6.68	7.03	7.18	0.63	1.50	2.45	3.14
1.675	4.35	4.91	5.34	5.56	1.22	2.34	3.42	4.20
1.700	2.77	3.43	3.96	4.28	2.14	3.40	4.65	5.45
1.725	1.69	2.37	2.87	3.21	3.48	4.85	6.13	6.95
1.750	0.93	1.55	2.08	2.40	5.25	6.56	7.77	8.59
1.775	0.46	0.98	1.43	1.74	7.28	8.46	9.64	10.43

Previous day's open int: Calls 395,212 Puts 287,097 (All currencies)
Previous day's volume: Calls 21,051 Puts 14,409 (All currencies)

FT FOREIGN EXCHANGE RATES

Spot	1-mth.	3-mth.	6-mth.	12-mth.
1.7190	1.7100	1.6960	1.6776	1.6500

IMM-STERLING $s per £

	Latest	High	Low	Prev.
Jun	1.7056	1.7088	1.6982	1.7028
Sep	1.6850	1.6870	1.6760	1.6816
Dec	-	1.6670	1.6600	1.6646

BASE LENDING RATES

	%		%		%
ABN Bank	12	Comm.Bk.of London Plc	12	McDonnell Douglas Bnk.	12
Adam & Company	12	Co-operative Bank	12	Midland Bank	12
Allied Trust Bank	12	Coutts & Co	12	Mount Banking	12
AIB Bank	12	Cyprus Popular Bk	12	Nat Bk. of Kuwait	13½
● Henry Ansbacher	12	Dunbar Bank PLC	12	NatWestminster	12
B & C Merchant Bank	12	Duncan Lawrie	12	Northern Bank Ltd	12
Bank of Baroda	12	Equatorial Bank plc	12	Nykredit Mortgage Bank	12½
Banco Bilbao Vizcaya	12	Exeter Bank Limited	12½	Provincial Bank PLC	14
Bank Credit & Comm	12	Financial & Gen. Bank	12	Roxburghe Bank Ltd.	13
Bank of Cyprus	12	First National Bank Plc.	15	Royal Bk of Scotland	12
Bank of Ireland	12	● Robert Fleming & Co.	12	● Smith & Williamson Secs.	12
Bank of India	12	Robert Fraser & Ptnrs.	12½	Standard Chartered	12
Bank of Scotland	12	Girobank	12	TSB	12
Banque Belge Ltd	12	● Guinness Mahon	12	Unibank plc	12
Barclays Bank	12	● Hambros Bank	12	● United Bk of Kuwait	12
Benchmark Bank	12	Hampshire Trust Plc	13½	United Mizrahi Bank	12½
Brit Bk of Mid East	12	Heritable & Gen Inv Bnk.	12	Unity Trust Bank Plc	12
● Brown Shipley	12	● Hill Samuel	12	Western Trust	12
CL Bank Nederland	12	C. Hoare & Co.	12	Westpac Bank Corp.	12
● Charterhouse Bank	12	Hongkong & Shanghai	12	Whiteaway Laidlaw	12
Citibank NA	12	● Leopold Joseph & Sons	12	Yorkshire Bank	12
City Merchants Bank	12	Lloyds Bank	12		
Clydesdale Bank	12	Meghraj Bank Ltd	12		

● Members of British Merchant Banking & Securities Houses Association.

MONEY MARKETS

London rates ease

WEAK UK retail sales encouraged an easing of wholesale interest rates in London yesterday. April sales fell 3.5 per cent, after rising 3.6 per cent in March. A decline was expected, but the figure was weaker than forecasts of around 2.8 per cent.

Three-month sterling interbank *fell to 11⅝-11½ from 11¹¹⁄₁₆-11⁹⁄₁₆* per cent, while 12-month money was unchanged 11¼-11⅛ per cent.

Short sterling futures rose to the day's high on Liffe after the retail sales news, finishing on a firm note. June delivery opened firm at 88.71 and touched a peak of 88.73, before closing at 88.72 compared with 88.65 previously.

Overnight interbank was firm at around 12½ per cent as credit remained in short supply on the London money market. The Bank of England *initially forecast a shortage of* £800m, but revised this to £750m at noon and to £700m in the afternoon. Total assistance of £629m was provided.

An early round of help was offered and at that time the authorities bought *£150m* bank bills outright in band 1 at 11⅞ per cent.

Before lunch another £203m bank bills were purchased in band 1 at 11⅞ per cent. In the afternoon £201m bills were bought, by way of £19m Treasury bills in band 1 at 11⅞ per cent and £182m bank bills in band 1 at 11⅞ per cent. Late assistance of around £75m was *also provided.*

Bills maturing in official hands, repayment of late assistance and a take-up of *Treasury bills drained £1,016m*, with exchequer transactions absorbing £400m and bank balances below target £5m. These outweighed a fall in the note circulation adding £610m to liquidity.

In Stockholm interest rates fell sharply on the first day of trading since Sweden liked the krona to the European currency unit, taking it out of a basket dominated by the dollar.

Six-month Treasury bills declined to 11.35 from 11.97 per cent and 10-year government bonds fell to 10.45 from 10.95 per cent. Financial markets in Stockholm were officially closed for the Whitsun holiday, but the Swedish Central Bank *opened its dealing room to* smooth moves towards a more European linked currency.

According to dealers linking the krona to the Ecu has effectively ruled out a devaluation, encouraging *yesterday's downward move in* rates.

UK clearing bank base lending rate 12 per cent from April 12, 1991.

FT LONDON INTERBANK FIXING

(11.00 a.m. May.20) 3 months US dollars		6 months US Dollars	
bid 5⅞	offer 6⅛	bid 6⅛	offer 6¼

The fixing rates are the arithmetic means rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted to the market by five reference banks at 11.00 a.m. each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque National de Paris and Morgan Guaranty Trust.

MONEY RATES

NEW YORK (Lunchtime)

		Treasury Bills and Bonds			
Prime rate	8½	One month	5.17	Three year	7.15
Broker loan rate	7½	Two month	5.32	Four year	7.37
Fed.funds	5⅞	Three month	5.58	Five year	7.74
Fed.funds at intervention	-	Six month	5.83	Seven year	7.97
		One year	6.14	10-year	8.09
		Two year	6.82	30-year	8.28

May.20	Overnight	One Month	Two Months	Three Months	Six Months	Lombard Intervention
Frankfurt	8.60-8.70	8.75-8.90	8.85-9.00	8.90-9.05	9.00-9.15	9.00
Paris	9⅛-9⅜	9-9⅛	9-9⅛	9-9⅛	9⅛-9¼	9.25
Zurich	7¾-8¼	7¾-8⅛	-	8-8¼	-	-
Amsterdam	8.88-9.00	8.97-9.05	-	9.00-9.08	-	-
Tokyo	7⅞-7⅞	7¾-8⅛	-	8-8⅛	-	-
Milan	10⅝-11	11⅛-11½	-	11½-11⅝	-	-
Brussels	8.88-9.00	8⅞-8⅞	-	9⅛-9⅜	-	-
Dublin	10⅞-10⅞	10⅝-10⅞	10⅝-10⅞	10⅝-10⅞	10⅛-10⅜	-

LONDON MONEY RATES

May 20	Overnight	7 days notice	One Month	Three Months	Six Months	One Year
Interbank Offer	13⅛	12½	12	11⅝	11⅜	11¼
Interbank Bid	11½	12⅛	11¾	11½	11¼	11⅛
Sterling CDs	-	-	11⅞	11½	11⅜	11⅛
Local Authority Deps.	12⅛	12¼	11⅞	11½	11¼	11⅛
Local Authority Bonds	-	-	-	-	-	-
Discount Mkt Deps	12½	12¼	11¾	11⅛	-	-
Company Deposits	-	-	12	11⅝	11⅜	11⅜
Finance House Deposits	-	-	11⅞	11⅝	11¼	11⅛
Treasury Bills (Buy)	-	-	11⅞	11	10¾	-
Bank Bills (Buy)	-	-	11⅝	11⅛	10⅞	-
Fine Trade Bills (Buy)	-	-	-	-	-	-
Dollar CDs	-	-	5.92	5.97	6.12	6.55
SDR Linked Dep. Offer	-	-	7¼	7⅞	7⅞	7⅞
SDR Linked Dep. Bid	-	-	7⅛	7⅞	7⅞	7⅞
ECU Linked Dep. Offer	-	-	9¾	9⅝	9⅝	9½
ECU Linked Dep. Bid	-	-	9⅝	9½	9½	9⅜

Treasury Bills (sell); one-month 11⅞ per cent; three months 10⅞ per cent; six months 10¾ per cent; Bank Bills (sell); one-month 11⅞ per cent; three months 11⅛ per cent; Treasury Bills; Average tender rate of discount 10.8427 p.c. ECGD Fixed Rate Sterling Export Finance. Make up day April 30, 1991. Agreed rates for period May 26,1991 to June 25, 1991, Scheme I: 13.07 p.c., Schemes II & III: 13.32 p.c. Reference rate for period March 29,1991 to April 30, 1991, Scheme IV&V: 12.024 p.c. Local Authority and Finance Houses seven days' notice, others seven days' fixed. Finance Houses Base Rate 12½ from May.1, 1991. Bank Deposit Rates for sums at seven days notice 4 per cent. Certificates of Tax Deposit (Series 6); Deposit £100,000 and over held under one month 8½ per cent; one-three months 11 per cent; three-six months 10½ per cent; six-nine months 10 per cent; nine-twelve months 9½ per cent; Under £100,000 8½ per cent from April 15,1991. Deposits withdrawn for cash 5 per cent.

MONEY MARKET FUNDS

Money Market Trust Funds

[illegible]

Money Market Bank Accounts

[illegible]

JOTTER PAD

CROSSWORD

No.7,548 Set by HIGHLANDER

ACROSS

1 Family get-together for *sporting fixture* (4,7)
7 Fossil fuel fall-back (8)
9 Correct procedure is to bore a hole (5)
10 *Graduates need replacement* for sculpture (3-6)
11 Board fighting against oriental dishes perhaps (9)
12 Northern *people and* not south-eastern (5)
13 Welsh resort, green and utterly enchanting initially (7)
15 Single combat: sounds like double (4)
18 Progress which is uneven *not firm* (4)
20 Jazz enthusiast's shout of derision (7)
23 Concerned with hearing spoken *sound* (5)
24 Bad-tempered with cash, according to verbal evidence (9)
26 *Pay* attention: one ballot has ten backing the masses (3,6)
27 A long university farewell (5)
28 First person for auditor to look at carefully (8)
29 Cook made stew, we inserted old fragrant plant (11)

DOWN

1 Colour for *stop-go* songbird (8)
2 Grumble that Crosby is cheating (8)
3 Highlander takes shelter from noisy brawl (6)
4 Hold me back, tossing caber (7)
5 Sent aid for distribution in lieu (7)
6 Judo enthusiast in town's undeveloped zone (5,4)
7 Gland swelling? Leave it *to* engineers (6)
8 Calm during periods of tension (6)
14 *Restaurant* where suspects are interrogated? (9)
16 Coma is broken a great deal by medicinal plant (8)
17 Lead *clubs possibly* have recreational gear (8)
19 Bonehead – all-round (7)
20 Gaming house introduces second card game (7)
21 Cattle food that's providing iron (6)
22 Give commendation to piano recruit (6)
25 Religious leaders beginning in mosques and Muslim schools (5)

Solution to Puzzle No.7,547

TARGET STRAIGHT / ABRUPT STARLING / CONTRACT INDENT / EASE QUARTER / PRELATE PLEA / LABOUR DESPATCH / TREELESS UNFAIR / RESISTER ATTEND

WORLD STOCK MARKETS

AUSTRIA | FRANCE (continued) | GERMANY (continued) | NETHERLANDS | SWEDEN (continued) | BELGIUM/LUXEMBOURG | DENMARK | FINLAND | FRANCE | ITALY | NORWAY | SPAIN | SWEDEN | SWITZERLAND | SOUTH AFRICA | JAPAN | AUSTRALIA | HONG KONG | MALAYSIA | SINGAPORE

CANADA

TORONTO

4:00 pm prices May 17

Quotations in cents unless marked $

MONTREAL

4:00 pm prices May 17

INDICES

NEW YORK

DOW JONES

STANDARD AND POOR'S

NEW YORK ACTIVE STOCKS

TRADING ACTIVITY

CANADA

TORONTO

Base values of all indices are 100 except NYSE All Common – 50; Standard and Poor's – 10; and Toronto Composite and Metals – 1000. Toronto indices based 1975 and Montreal Portfolio 4/1/83. † Excluding bonds. ‡ Industrial, plus Utilities, Financial and Transportation. (c) Closed. (u) Unavailable.

THAILAND						
Bangkok SET (30/4/75)	813.78	820.93	816.36	824.49	908.13 (19/4)	582.48 (16/1)
WORLD						
M.S. Capital Intl (1/1/70) (S)	(u)	504.8*	507.6	505.5	529.2 (17/4)	439.1 (16/1)

**Saturday May 18: Taiwan Weighted Price: 5982.26 Korea Comp Ex. 636.38.
& Subject to official recalculation. *Calculated at 15.00 GMT.
Base values of all indices are 100 except: BEL20, HEX General, ISEQ Overall and DAX – 1,000, JSE Gold – 255.7, JSE 26 Industrials – 264.3 and Australia All Ordinary and Mining – 500; (c) Closed. (u) Unavailable.

TOKYO - Most Active Stocks

Monday 20 May 1991

	Stocks Traded	Closing Prices	Change on day		Stocks Traded	Closing Prices	Change on day
Japan Steel Works	7.3	785	-15	Yokohama Rubber	2.1	819	-6
Hitachi	4.3	1,120	-10	Clarion	2.0	1,080	-10
Mitsubishi Heavy	3.8	748	-7	Mitsubishi Electric	1.8	727	-13
Chiyoda	2.9	2,400	-80	Sumitomo Metal	1.7	505	0
Tokai Kanko	2.6	801	-87	Nippon Steel	1.5	489	-5

3:15 pm prices May 20

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

1991 High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
15⅞	9¼	AAR Corp	0.48	0.04	12	180	13⅛	13	13	-⅛
18¼	14½	A L Labs A	0.24	0.01	18	251	16¼	16	16⅛	-⅛
54¼	40⅞	AMP Inc	1.44	0.03	18	516	49⅛	48⅛	48⅝	-⅞
65⅛	44¼	AMR				182765	61	59⅞	60	-1⅛
2⅝	1¼	ARX			2	20	1⅝	1⅝	1½	
48⅛	41½	ASA x	3.50	0.08	13	612	45¼	44⅞	44⅞	-⅛
54	39¼	Abbott Lab	1.00	0.02	22	3502	51¼	50½	50¾	+⅜
13⅝	9⅞	Abitibi Pr	0.50	0.04	25	2	13½	13½	13½	
11½	10⅛	ACM Gst In x				273	11⅜	11¼	11¼	
9¼	8¼	ACM GvOpp	1.01	0.11		133	9⅜	9¼	9¼	-⅛
9¼	8¼	ACM Gvt Sp	1.01	0.11		650	9⅛	9	9⅛	+⅛
11	9⅞	ACM Gvt Se				229	10⅞	10¾	10⅞	
8¼	7⅝	ACM Man x	1.01	0.13		550	8⅛	8	8	-⅛
12⅞	11⅞	ACM Mangd x	1.50	0.12		215	12⅝	12½	12½	
7¼	4¾	Acme Cleve	0.40	0.06	15	75	6⅞	6⅞	6⅞	+⅛
6	3½	Acme Elect			39	40	4	3⅞	4	
40	22¼	Acuson			25	251	35	34¼	34¼	-¼
17⅞	14¼	Adams Exp x	0.48	0.03	0	177	17⅛	17⅛	17⅛	+⅛
20⅛	16⅞	Adobe12Pf	2.40	0.12		9	19⅝	19⅝	19⅝	-⅛
9¼	7	Adobe Res			20	347	8	7⅞	7⅞	-⅛
35⅛	16	Ad Micro				107	33½	33⅛	33½	
14¼	4⅝	Ad Micro P	3.00	0.27	12	1999	11½	11⅜	11¼	+¼
5⅛	2¼	Advest Grp	0.16	0.04	5	30	4¼	4⅛	4⅛	
49⅛	33⅞	Aetna Lf	2.76	0.07	7	793	40⅞	40⅛	40⅛	-⅛
10⅝	6⅝	Affil A x	0.24	0.03	35	494	8⅞	8½	8⅞	+⅛
18¾	12	Ahmanson x	0.88	0.05	9	725	16⅜	16⅛	16⅛	-⅜
7⅞	2⅞	Aileen Inc			10	57	6¼	6⅛	6⅛	
70⅞	51⅞	Air Pr Chm			15	1072	66¼	65¼	66	+½
28⅛	16⅝	Airborne Frt	0.30	0.01	14	137	24⅛	23⅝	23⅝	-1
18⅞	12½	Airgas Inc			17	36	14½	14⅛	14½	
16¼	10	Airlease	2.29	0.17	6	14	13⅛	13⅛	13⅛	+⅛
92½	86¼	AlaPw8.16				z100	u94	94	92½	
24⅝	21⅛	AlaPw PfA				78	u24⅝	24⅝	24⅝	+⅛
104½	100	AlaPw9 44				2	103½	103	103	
108	102⅝	Alab Pw 11				2	104	104	104	
102	96	Alab Pw 9P				5	u102	100	102	
95	88	Alab 8.28C				2	93	93	93	-½
10¼	9⅞	AlaPwDpPf				20	u10¼	10⅛	10¼	
25⅜	17½	Alaska Air	0.20	0.01	142	205	22⅞	22¾	22⅞	
16¾	10	Albany Int	0.35	0.02	66	109	13¾	13⅝	13¾	
34¼	23⅞	AlCulvr B	0.22	0.01	17	20	23⅞	23⅞	23⅞	-⅛
24⅞	16¾	AlCulvr A	0.22	0.01	13	967	18	18	18	
51⅛	32⅝	Albertsons x	0.58	0.01	26	1301	45¼	44½	44¾	-⅛
23¾	18½	Alcan Alum x	1.12	0.06	12	606	19¾	19½	19⅝	-⅛
35⅞	29	Alco Stand x	0.88	0.03	14	111	30¼	30	30	-¼
27⅝	20½	Algr Alex	1.00	0.05	18	170	21⅞	21⅛	21½	-¼
30⅞	19¾	Alexanders			84	174	u31½	30⅞	31¼	+¾
28½	21¼	Allegh Lud	0.86	0.04	12	338	25¼	24⅞	24⅞	-⅜
39⅞	35	Allegh Pow	3.16	0.08	11	201	39½	39¼	39⅜	
20	16⅝	Allen Gp			10	19	18¾	18¾	18¾	-⅛
15⅞	9¼	Allen Con			16	314	12⅜	12⅛	12⅜	-⅛
26½	16¼	Allergan x	0.32	0.01	17	867	22¼	21¾	22	+¼
24⅛	15¼	Allnce Cap	1.84	0.08	15	76	22⅛	22⅛	22¼	-⅛
13⅜	9⅞	Allnce Gl				271	12	11⅞	11⅞	-⅛
23⅝	16¼	All Ir Bk				31	23⅜	23⅛	23¼	
31⅞	25⅞	Alld Sig x	1.80	0.06	9	857	28⅛	27⅞	27⅞	-⅛
9⅞	8¼	AlstMunTr x	0.71	0.07		122	9⅝	9½	9½	-⅛
9⅞	8⅝	AlstIncOp x	0.78	0.08		109	u9⅞	9¾	9⅞	+⅛
9⅞	8¼	AlstMnInc x	0.72	0.08		198	u9⅞	9¾	9¾	
9¾	8⅝	AlstMnInc x	0.66	0.07		18	9½	9⅜	9½	+⅛
43	31¾	Alltel Crp	1.40	0.03	16	170	40⅞	39⅞	40¼	+⅜
71⅞	53¼	Alcoa	1.60	0.02	23	1061	66⅞	66	66¼	+⅜
9⅞	9⅛	AmGovInc				387	9⅜	9½	9⅝	
27½	20⅞	Amax x	0.80	0.04	9	668	22¾	22⅝	22⅝	
15¾	11½	Amax Gold	0.08	0.01	28	489	12⅝	12½	12½	

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Continued on next page

INTERNATIONAL COMPANIES AND FINANCE

British Sugar helps ABF increase profit to £317m

By Clare Pearson in London

ASSOCIATED British Foods, the milling and baking group, beat analysts' forecasts yesterday with the announcement of pre-tax profits up from £283.8m ($487m) to £317.4m in the 12 months to the end of March.

The shares gained 10p to 510p on the announcement by the group, which in January paid £880m to fulfil a long-held ambition to buy British Sugar.

The stock market was pleased to see a solid first-time contribution from the new subsidiary, as well as a strong rise in income from the company's substantial cash resources.

The company said the contribution from British Sugar had exceeded financing costs, accounting for the bulk of earnings from new subsidiaries which in all amounted to £33.2m. Group turnover was £3.13bn (£2.77bn). Earnings per share rose to 46.9p (41.9p).

The company's year-end has been changed to September. At 8.5p (7.7p), the second interim dividend announced yesterday is in line with a forecast made when British Sugar was acquired. That makes 12.2p (11p) for the 12 months.

Net of interest payable, interest income rose to £128.5m (£124.5m). ABF said it had positioned itself favourably to take advantage of recent strength in the money and gilt markets.

ABF had chosen to finance part of the consideration for British Sugar initially from borrowings, leaving more funds available to benefit from rises in the fixed interest markets due to interest rate cuts.

Within a trading surplus of £188.9m (£159.3m), the UK manufacturing division put in £110.1m. However, ABF said there would have been a £12.7m decrease in profits from these operations if the British Sugar contribution had not been included.

Mr Garry Weston, chairman, said the division, one of Britain's two largest bakers as well as the manufacturer of Ryvita and Burton's biscuits and packer of Twinings tea, had been hit by increasing competitiveness in the UK marketplace.

It was also affected by £12m of closure costs, associated with the shutdown of three big bakeries and other redundancies, and rising wheat prices.

Lex, Page 18

First reverse at JVC in four years

By Emiko Terazono in Tokyo

JVC, the Japanese consumer electronics company, yesterday reported a 27.1 per cent drop to Y26.8bn ($189.20m) in consolidated pre-tax profits for the year to March 1991.

JVC (Victor Company of Japan), which posted its first pre-tax profit fall in four years, blamed cuts in product prices due to intensified competition, increases in research and development and advertising expenses for the decline.

Overall sales increased 6.9 per cent to Y926.2bn thanks to a 6 per cent rise in its video and related equipment interests. Television sales increased by 13 per cent and information related equipment rose by 20 per cent. After-tax profits fell 13.1 per cent to Y16bn.

On a non-consolidated basis, JVC said that pre-tax profits fell by 8.6 per cent to Y22.0bn as sales rose 3.3 per cent to Y638.7bn.

Export sales, which account for 55 per cent of total sales of the parent company, rose by 15 per cent to Y353.3bn. Video and related equipment rose 2 per cent and information related equipment increased 21 per cent, but sales in audio equipment fell 4 per cent.

For the year ending March 1992, the parent company projects a 0.4 per cent drop in pre-tax profits to Y22bn on an 8 per cent rise in sales to Y690bn.

Two buy 60% stake in Fundia

RAUTARUUKKI, the Finnish state-owned steel company, and Norsk Jern, a Norwegian steel holding company, have between them acquired a 60 per cent stake in Fundia, a Swedish steel reinforcing bars group, writes Enrique Tessieri in Helsinki.

The purchase price is put at around SKr330m ($53.4m). Rautaruukki and Norsk Jern hope to purchase the remaining 40 per cent of Fundia which had sales of SKr2.6bn in 1990.

The acquisition will help to strengthen Rautaruukki's position in long steel products, including reinforcing bars and wire rods.

French glove-maker in breathing apparatus deal

By George Graham in Paris

COMASEC International, the French company which is European leader in the production of protective gloves, has bought Interspiro, a manufacturer of breathing apparatus, from Sweden's Nobel group.

No price was announced for the deal, but Comasec is understood to have paid over FFr100m ($17.21m) for Interspiro, which had sales of SKr172m ($28m) last year.

The acquisition will propel Comasec close to the two world leaders in breathing apparatus, tripling its presence in the European market. Interspiro, which specialises in fire-fighting and pollution control masks, had 12 per cent of the European market, to Comasec's 6 per cent.

In North America, Comasec said its share of the breathing apparatus market would rise to 25 per cent with the addition of Interspiro's 7 per cent market share. Comasec, which is owned by the Berend family, had sales of FFr552m last year and ranks second in the world in the manufacture of industrial protective gloves.

Bond Corp shareholders agree to debt swap

By Kevin Brown in Sydney

BOND Corporation shareholders yesterday approved a proposed debt-for-equity swap which will leave Mr Alan Bond, the former chairman, with less than 6 per cent of the group's shares.

Mr Peter Lucas, who replaced Mr Bond as chairman last year, said a scheme of arrangement providing for the swap was approved by holders of just over 75 per cent of the group's stock at a shareholders' meeting in Perth.

The vote follows approval from Swiss-franc bondholders in Geneva on Thursday, and clears the way for a vote by other European bondholders within two weeks.

The scheme was also approved yesterday by Australian Consolidated Investments, formerly Bell Resources, which remains a substantial creditor.

However, a meeting of partially-secured creditors, which must also approve the scheme, was adjourned after objections by American Express Bank. A further meeting will be held.

The scheme is dependent on approval by the Western Australian Supreme Court, which will hear an application from Bond Corporation after all creditors and shareholders have voted.

Mr Lucas said Mr Bond voted in favour of the reconstruction through Dallhold, one of his privately-owned family companies, which owns 54 per cent of Bond Corporation.

Several obstacles in the way of the scheme have been overcome, including a decision by the liquidator of J.N. Taylor Holdings, a Bond Corp subsidiary, to withdraw a winding-up action against the group's finance arm.

However, Bond Corp lost a £150m (US$259.50m) damages claim on Friday against its former partners in British Satellite Broadcasting Holdings, which has since merged with Mr Rupert Murdoch's Sky Television to form British Sky Broadcasting.

Bond Corp directors say the scheme of arrangement could return between 20 and 25 cents in the dollar to creditors.

West Germans go for eastern gold

Leslie Colitt examines the stampede to pick up cross-border assets

DESPITE the thinness of their order books, some eastern German industrial companies are being snapped up by western predators with near gold-rush ferocity.

A case in point is the process plant sector where in recent months Asea Brown Boveri (ABB), the Swedish-Swiss electrical engineering group, has been an eager buyer of eastern German assets.

Last March, ABB's German subsidiary in Mannheim bought Bergmann-Borsig, the leading manufacturer of power station installations, from the Treuhand privatisation agency. The deal was completed despite cancellation of a large order for heat exchangers when the Soviet-designed nuclear plant at Stendal was scrapped for safety reasons.

Automatisierungsanlagen Cottbus, which ABB picked up a month earlier, is reeling from a drop in domestic orders for its process automation equipment. Mr Joachim Schulze, managing director of the Cottbus company, is convinced that its future would have been dire if ABB had not appeared on the scene.

"The Treuhand would not have given us further financing," he says as he shows visitors round the company's near-deserted production plants. The Cottbus group has been hit especially by the collapse of orders from former Comecon countries.

In better financial shape is Energiebau Dresden, eastern Germany's leading producer of high-voltage overhead lines and switchgear which was bought by ABB late last year. Energiebau Dresden makes a profit: ABB's other recent eastern German acquisitions are expected to remain in the red until 1993.

However, Mr Percy Barnevik, head of ABB, has not made this decisive push into eastern Germany on the back of current new order-flows, although there are signs that the decline in order intake has begun to bottom out. He is preparing the company for an expected wave of public spending to improve infrastructure in the five new east German Länder, or states.

According to Mr Eberhard von Koerber, the chairman of ABB Germany, German electricity suppliers alone plan to spend close to DM40bn ($23.30bn) on new power generation facilities in east Germany by 1995.

Mr von Koerber said ABB and other companies investing in eastern Germany expected a "certain amount of preferential treatment" for local suppliers from public procurement bodies.

ABB has already obtained a letter of intent to build a new power station at Rostock for more than DM100m which is to be completed in 1995. The work is to be divided between ABB Bergmann-Borsig in east Berlin and ABB in Mannheim.

At the same time, ABB has won a DM20m contract to plan a flue-gas desulphurisation system for two 500-megawatt units of the Boxberg power station,

Percy Barnevik: preparing for public spending wave

the largest lignite-fuelled electricity plant in Europe and an immense air polluter. Total work involves the retrofitting of the two units, installation of desulphurisation scrubbers and new electrical filters.

ABB hopes to obtain a sizeable share of the final DM1bn contract despite fierce competition, notably from Siemens, which is also investing heavily in eastern Germany.

ABB expects to complete negotiations shortly with the Treuhand for the takeover of two transformer factories in Nauen and Halle.

Mr Achim Lennertz, the Treuhand negotiator with ABB, said the fact that negotiations were undertaken by ABB's German unit made for smoother handling from the start. Neither he nor ABB, however, would disclose how much ABB paid for the eastern German acquisitions.

Mr Lennertz said that while the price paid was important, so was the amount of money a western bidder was prepared to invest in the companies as well as how many jobs would be created.

Mr Wolf Schöde, a Treuhand spokesman, said companies were often sold for a "negative price" in order to allow the investor group to create a tax-paying company. He complained that companies considering investments in eastern Germany were often overly cautious and reluctant to surmount hurdles or take risks.

"Next year, the telephones will be working and other problems will have vanished, but by then the best companies will have been privatised," he says.

ABB plans to employ 10,000 people in eastern Germany by next year – compared with 35,000 in western Germany – although personnel is being reduced in all its eastern companies. Bergmann-Borsig, which had 3,500 employees at the end of March will release more than 1,000 next month. Retraining has been introduced and social plans implemented for those dismissed.

Average wages are 60 per cent below those in western Germany, but will reach western German levels by April 1994 in agreement with the IG Metall union. Significantly, the 280 apprentices are being kept on although not all will qualify for jobs with the company.

British Steel chief executive quits

By Charles Leadbeater, Industrial Editor

BRITISH STEEL'S chief executive, Mr Martin Llowarch, last night unexpectedly announced his resignation.

Mr Llowarch's departure will threaten the company's plans to organise an orderly succession to Sir Robert Scholey, aged 70, the chairman, who completes his contract at the end of this year.

Although the succession had not been discussed on the board, it was widely assumed that Mr Llowarch, 55, was being groomed for the post.

Mr Brian Moffat, 52, the finance director, will now take over as chief executive on July 1.

Mr Llowarch's resignation comes as British Steel is responding to the most savage downturn in steel demand since the recession of 1980-81. The company denied that his departure reflected a rift between Mr Llowarch and Sir Robert over strategy.

The resignation will put Sir Robert under pressure to delay his departure. The company will almost certainly have to consider an outsider as chairman. Plans for the succession will be the priority at the next meeting of the board.

Mr Llowarch told Sir Robert last week that he wanted to retire to pursue other interests. Although several directors contacted him to explore whether there was any grounds on which he might be persuaded to stay, Mr Llowarch remained resolute.

The past year has been particularly tough at British Steel as profits have fallen in the wake of the recession. Mr Llowarch has been responsible for the extensive cost cutting at the company which has led to thousands of job losses.

Ares-Serono sales up by 26% to $176m

ARES-SERONO, the Swiss-based pharmaceutical company, increased first-quarter sales by 26 per cent to $176.4m, writes William Dullforce in Geneva.

Excluding currency fluctuations, growth in turnover was 17 per cent.

Operating income grew by 18 per cent to $32.8m, but net earnings rose only 3.3 per cent to $13.5m, or $24.76 a share.

The group, which reports in US dollars and pays its dividend in Swiss francs, is paying an unchanged dividend of SFr25 per bearer share and SFr10 per registered share on the 1990 account.

FINANCIAL TIMES Tuesday May 21 1991

AMERICA

Bonds lift equities in light trading

Wall Street

AN EARLY rise in bond values helped boost sentiment in the stock market yesterday morning, but with investors still adopting a wait-and-see approach to equities, gains were relatively modest, *writes Patrick Harverson in New York.*

By 1.30 pm the Dow Jones Industrial Average was up 7.38 at 2,894.01. The other indices were little changed at midsession, with the more broadly based Standard & Poor's 500 up just 0.74 at 373.13 at 1 pm, and the Nasdaq composite of over-the-counter stocks down 0.5 at 481.33.

Turnover on the New York SE was very light at 62.5m shares by 1 pm. The fact that declining stocks were outnumbering advancing stocks by 724 to 643 testified to the generally weak tone of the market.

The opening advance came in the wake of higher bond prices, which reacted favourably to reports of comments from Mr Alan Greenspan, chairman of the Federal Reserve, hinting at further interest rate cuts if the economy did not soon show signs of recovering from its recession. However, the lack of volume confirmed that investors were staying away from equities until they could see a significant improvement in the economic outlook.

The big technology stocks, which were undermined by Compaq's profit warning last week, put in a mixed performance. Compaq, which suffered from heavy selling after its forecast of weak profits, bounced back with a rise of $⅝ to $36⅝. IBM, however, remained subdued, dropping $⅛ to $103⅝, while Digital Equipment steadied at $63 and Hewlett-Packard, which announced better-than-expected earnings on Wednesday, rose $⅝ to $48⅝.

Dow Chemical rose $1⅝ to $53 after two securities houses, First Boston and Smith, Barney, upgraded their investment ratings on the stock, citing expected improvements in the company's earnings ability.

K-Mart, the giant retailing group, jumped $1¼ to $41⅞ after reporting a rise in first quarter earnings to 53 cents a share, up from 50 cents a share a year earlier, in spite of the nationwide slowdown in consumer spending.

Ameritrust, the mid-west commercial banking group, climbed $2¼ to $19¾ after National City Corp, a rival regional bank, confirmed that it had offered to negotiate a $889m stock swap acquisition of Ameritrust. National City shares fell $1 to $35 on the news.

LaserMaster Technologies tumbled $1 to $5 after a local Minneapolis newspaper highlighted the printing product maker's large inventory levels and dwindling cash reserves.

● Toronto was shut yesterday for Victoria Day.

The weekly review of the world's stock markets will appear in tomorrow's paper.

ASIA PACIFIC

Volume shrinks to four-month low

Tokyo

SHARE PRICES declined across the board as thin volume accentuated the effect of selling by arbitrageurs and investment trusts, *writes Emiko Terazono in Tokyo.*

The Nikkei average lost 178.91 to 25,523.03, while turnover shrank from 260m shares to 170m, falling below 200m for the first time since January 14. The Nikkei set a day's high of 25,738.73 at the opening and a low of 25,330.70 in the afternoon.

Falls outnumbered advances by 766 to 183, with 158 issues unchanged. The Topix index of all first section stocks shed 14.62 to 1,938.82, and in London trading the ISE/Nikkei 50 index eased 4.67 to 1,437.97.

High-technology issues continued to weaken. Sony receded Y100 to Y5,890, moving below the Y6,000 support level, and TDK slipped Y90 to Y5,140. Canon ended Y40 down at Y1,490 on a lower than expected profits forecast for the current year.

Matsushita Refrigeration fell Y90 to Y1,070 on prospects of lower pre-tax profits. Matsushita Seiko lost Y41 to Y949 and Matsushita-Kotobuki Electronics shed Y60 to Y2,000.

Speculative shares retreated on rumours of selling by speculative groups. Tobishima, the contractor, dropped Y120 to Y1,070, Tokai Kanko, the hotel chain, declined Y97 to Y601 and Nihon Hohyaku, an agrochemical company, dipped Y150 to Y2,100.

Japan Steel Works, the most active issue of the day, weakened Y15 to Y765 after reaching a year's high of Y785 in the morning. The issue attracted early demand on hopes that capital investment by the oil refiners would help its engineering plant business.

Yamaha retreated Y80 to Y1,670 after pre-tax profits for the current year were revised to Y8bn from Y11bn previously. Bridgestone, the tyre maker, lost Y40 to Y1,030 on last week's news that it would inject more capital into Firestone, its US subsidiary.

Sumitomo Metal Mining improved Y10 to Y1,310 on rumours that it had discovered a gold deposit. Speculation about an imminent warrant bond issue added to the stock's popularity.

The food sector was one of the few bright spots of the day; investors considered some issues to be cheap. Toyojozo, the alcoholic drinks company, put on Y3 to Y751, Nisshin Oil gained Y20 to Y1,050 and Asahi Breweries climbed Y20 to Y1,350.

In Osaka, the OSE average dipped 108.25 to 28,217.70 on low volume of 8.8m shares, down from 14.9m. Nintendo, the video game maker, fell Y600 to Y14,000 on small-lot selling. Investors were concerned about the stock's high margin positions.

Tatsuta Electric Wire & Cable rose Y60 to Y1,210 on expectations of orders from electric power companies and Japan Railway. Reports that Tatsuta plans to advance into electronics with its copper bonding wires and paste for electromagnetic wave shielding also attracted small-lot buying.

Roundup

ACTIVE TRADING lifted Hong Kong nearer to its all-time high yesterday, but most Pacific Rim markets were quiet.

HONG KONG reached another post-1987 crash peak, as the Hang Seng index passed the 3,900 level to close at 3,917.09, up 34.25 or 0.9 per cent. The index ended within 33 points of its record high. Turnover was heavy at HK$1.88bn, up from HK$1.83bn.

Hopes that the new airport would now go ahead fuelled gains, with the property sector in the lead. Cheung Kong climbed 30 cents to HK$19.20, New World Development added 50 cents at HK$11.20 and Hongkong Land, which topped the most active list, gained 40 cents to HK$9.35.

SINGAPORE rose after some encouraging economic figures, but ended below the day's high on profit-taking. The Straits Times Industrial index firmed 8.46 to 1,522.21 but volume fell to 32m shares from 42m.

Relief that Singapore Airlines' results were no worse than expected helped its foreign shares to rise 70 cents to S$19.60 and its local shares to gain 30 cents to S$13.40.

AUSTRALIA was steady. The All Ordinaries index eased 0.1 to 1,531.6 in thin turnover of A$392m, down from A$719m.

Adsteam and two of its associates were reinstated by the Australian Stock Exchange. The stocks had been suspended since May 2, when a corporate restructuring plan collapsed. Adsteam dropped 3 cents to 9 cents and David Jones fell 13 cents to 30 cents, but Tooth and Co rose 4 cents to 38 cents.

Rothmans, the tobacco company, appreciated 15 cents to A$12.90 after announcing its annual group operating profit. Coal and Allied, subject of a hostile takeover offer from CRA, shed 4 cents to A$8.54. CRA said it held more than 30 per cent of the coal producer as the bid ended.

ANZ, with interim profits due this week, fell 8 cents to A$3.82. QTC rose a cent to A$1.28 after 6.5m shares, slightly more than 1 per cent of the company's issued capital, were crossed at A$1.25 each.

NEW ZEALAND advanced in quiet trading on hopes of further interest rate cuts. The Barclays index gained 15.54 or 1 per cent to 1,542.66 in turnover of NZ$12.8m, down from NZ$13.9m. Fletcher Challenge inched up a cent to NZ$3.83.

TAIWAN was lifted by the financial sector on news that the finance ministry had completed its sales of shares in three commercial banks. The weighted index rose 127.81 or 2.1 per cent to 6,110.07. Turnover was a moderate T$59.3bn, up from T$51.3bn.

MANILA was boosted by strong first-quarter results and ignored weekend bombings. Investors saw the bright side of the postponement of the public offering of Ayala Land, which had depressed the market on Friday, as the delay could improve liquidity. The composite index rallied 28.31 to 1,144.86 but turnover thinned to 161m pesos from 189m.

SEOUL came under pressure from tight liquidity and lingering political uncertainty. The composite index shed 7.67 to 628.71 on turnover of Won84.7bn, against Won82bn. The market was also concerned by news that customer deposits with securities houses had fallen to their lowest level since April 20, 1988.

BOMBAY eased as India went to the polls for the second time in 18 months. The BSE index receded 13.44 to 1,284.25.

SOUTH AFRICA

JOHANNESBURG was steady in featureless trading. The all-gold index closed up 3 at 1,137 as world prices stayed at $354. The industrial index was down 3 at 3,503 and the overall index was also barely changed, at 3,032 versus 3,035.

EUROPE

Milan eases on renewed fears over Fiat

FIAT continued to weigh down Italy yesterday, while Spain moved higher in quiet trading, but most of the excitement was restricted to the emerging markets. Most bourses were closed for Whit Monday, *writes Our Markets Staff.*

MILAN eased in choppy trading. There were renewed fears that Fiat would cut its 1990 dividend, which is due to be published today. The Comit index fell 1.57 to 573.35.

Trading in Fiat began on a bullish note, with the stock gaining L40 to be set officially at L5,600. But the share then fell to L5,450 after hours. Montedison also featured before the release of its 1990 results and dividend. The shares closed L5 lower at L1,425 and eased later to L1,403.

Generali rose L200 to L35,100 but gave up its gains after hours. The insurer has still not disclosed the reason behind its rights issue, and there was speculation that the move was aimed solely at strengthening Mediobanca's position as a core shareholder.

FT-SE Eurotrack 100 - May 20

Hourly changes ‡							
Open	10 am	11 am	Noon	1 pm	2 pm	3 pm	Close
1119.41	1120.45	1120.13	1119.49	1118.80	1119.24	1118.85	1120.04
Day's High N/A				Day's Low N/A			
May 17	May 16	May 15	May 14	May 13			
1118.61	1112.66	1109.43	1116.47	1125.32			

Base value 1000 (26/10/90) ‡ Indicative

MADRID recouped most of Friday's loss of 2.75 points. The general index rose 2.39 to 286.07 in light turnover of Pta12bn, down from Pta35bn.

BBV added Pta75 to Pta3,415 on volume of 391,975 shares. The bank was reported to have agreed to sell Banco de Extremadura to Portuguese savings bank Caixa Geral de Depositos for about Pta10bn.

Construction stocks firmed, with Cubiertas up Pta730 or 4.1 per cent at Pta18,650.

ISTANBUL gained 5.1 per cent after the central bank said that it would introduce price limits at tomorrow's six-month Treasury bill auction, to keep maximum rates to 66 per cent compared with 74 per cent at the previous auction.

The 75-share index rose 177.73 to 3,652.47 as turnover grew to TL215bn from TL92bn.

ATHENS fell sharply, with the financial sector recording the biggest losses. The general index shed 37.34 or 3.6 per cent to 990.59.

FT-ACTUARIES WORLD INDICES

Jointly compiled by The Financial Times Limited, Goldman, Sachs & Co., and County NatWest/Wood Mackenzie in conjunction with the Institute of Actuaries and the Faculty of Actuaries

NATIONAL AND REGIONAL MARKETS	FRIDAY MAY 17 1991								THURSDAY MAY 16 1991					DOLLAR INDEX		
Figures in parentheses show number of lines of stock	US Dollar Index	Day's Change %	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	Local % chg on day	Gross Div. Yield	US Dollar Index	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	1991 High	1991 Low	Year ago (approx)
Australia (72)	145.21	−0.9	125.42	127.08	131.06	123.38	−0.7	5.39	146.46	124.44	127.35	129.22	124.25	147.30	112.74	131.82
Austria (19)	200.66	−1.5	173.32	175.62	181.11	177.99	−0.6	1.48	203.76	173.12	177.17	179.78	178.98	222.37	167.00	246.61
Belgium (60)	138.47	−0.5	119.60	121.16	124.97	119.86	+0.2	4.94	139.23	118.29	121.05	122.84	119.66	151.20	121.73	152.70
Canada (117)	136.79	−0.2	118.15	119.71	123.45	113.96	−0.1	3.51	137.11	116.49	119.21	120.96	114.08	141.10	126.49	136.00
Denmark (31)	237.44	−1.8	205.08	207.80	214.30	213.62	+0.3	1.57	241.84	205.47	210.28	213.37	212.98	270.58	217.74	254.04
Finland (21)	113.42	−0.9	97.96	99.26	102.36	95.16	−0.9	2.55	114.47	97.26	99.54	101.00	96.07	125.16	90.61	141.54
France (111)	136.18	−1.8	117.63	119.18	122.90	125.40	+0.1	3.40	138.71	117.85	120.60	122.37	125.28	152.26	121.86	167.64
Germany (88)	108.65	−1.8	93.84	95.10	98.08	98.06	+0.6	2.27	110.63	93.99	96.20	97.60	97.60	125.35	102.48	133.60
Hong Kong (47)	160.14	+0.6	138.32	140.15	144.54	160.11	+0.6	4.27	159.15	135.22	138.38	140.42	159.12	160.14	119.62	121.42
Ireland (17)	152.94	−2.1	132.10	133.85	138.04	139.40	+0.0	4.03	156.20	132.71	135.82	137.81	139.39	182.46	132.88	183.85
Italy (91)	75.98	−1.7	65.62	66.49	68.57	72.94	+0.2	3.25	77.26	65.64	67.17	68.16	72.79	88.23	72.05	108.16
Japan (452)	137.36	−0.4	118.64	120.21	123.99	120.21	+0.3	0.71	137.91	117.17	119.91	121.69	119.91	146.97	118.35	151.12
Malaysia (33)	228.71	+0.4	197.54	200.15	206.41	242.82	+0.6	3.12	227.82	193.56	198.07	200.99	241.37	247.78	192.83	225.22
Mexico (12)	968.19	−0.9	836.25	847.33	873.83	3164.59	−1.0	0.40	976.69	829.82	849.21	861.70	3195.04	996.27	534.45	501.89
Netherland (40)	134.96	−3.5	116.57	118.11	121.81	120.49	−1.4	4.32	139.92	118.88	121.66	123.45	122.20	145.73	125.70	141.60
New Zealand (14)	52.60	+0.9	45.43	46.03	47.47	47.19	+0.9	7.45	52.14	44.30	45.34	46.00	46.78	54.64	41.18	63.90
Norway (30)	200.81	−2.3	173.45	175.75	181.25	183.98	+0.0	1.64	205.53	174.63	178.71	181.34	183.98	223.24	182.24	242.80
Singapore (25)	199.63	−0.3	172.43	174.71	180.17	162.88	+0.1	2.06	200.15	170.05	174.03	176.59	162.71	208.25	151.63	203.16
South Africa (60)	211.43	−0.6	182.62	185.03	190.82	151.04	−0.1	3.74	212.78	180.78	185.00	187.72	151.25	212.78	173.00	190.71
Spain (41)	159.52	−2.9	137.78	139.61	143.97	129.43	−1.0	4.37	164.26	139.55	142.82	144.92	130.78	171.12	131.51	163.30
Sweden (27)	177.31	−0.6	153.15	155.18	160.04	162.22	+0.9	2.70	178.45	151.62	155.16	157.45	160.75	204.12	146.60	202.67
Switzerland (66)	92.05	−1.7	79.51	80.57	83.09	83.72	+0.1	2.33	93.62	79.54	81.40	82.60	83.60	100.67	82.17	101.35
United Kingdom (294)	169.12	−2.3	146.07	147.99	152.62	146.07	−0.7	4.92	173.16	147.12	150.54	152.76	147.12	187.44	156.27	154.94
USA (523)	150.78	+0.1	130.23	131.96	136.09	150.78	+0.1	3.25	150.68	128.02	131.02	132.95	150.68	158.24	125.95	143.23
Europe (936)	136.94	−2.1	118.28	119.84	123.60	120.94	−0.3	3.90	139.90	118.86	121.64	123.43	121.32	151.52	125.50	146.13
Nordic (109)	176.91	−1.4	152.80	154.83	159.67	154.38	+0.5	2.09	179.33	152.37	155.93	158.22	153.66	200.81	155.55	200.14
Pacific Basin (643)	138.06	−0.4	119.24	120.83	124.61	121.23	+0.2	1.05	138.58	117.74	120.50	122.27	120.95	145.92	117.86	149.35
Euro − Pacific (1579)	137.93	−1.1	119.14	120.71	124.46	121.98	+0.0	2.22	139.47	118.49	121.25	123.04	121.97	147.66	121.29	148.43
North America (640)	149.83	+0.0	129.41	131.14	135.25	148.30	+0.1	3.26	149.76	127.24	130.23	132.15	148.22	157.04	125.91	142.70
Europe Ex. UK (642)	117.34	−2.0	101.35	102.71	105.92	106.20	+0.0	3.13	119.67	101.68	104.07	105.61	106.22	129.60	106.85	138.91
Pacific Ex. Japan (191)	145.14	−0.2	125.36	127.04	131.01	129.06	−0.1	4.72	145.39	123.53	126.43	128.29	129.13	145.39	111.40	127.50
World Ex. US (1768)	139.11	−1.1	120.15	121.75	125.55	122.69	+0.0	2.28	140.60	119.46	122.26	124.05	122.70	148.16	122.32	149.63
World Ex. UK (1997)	139.36	−0.5	120.37	121.97	125.79	129.94	+0.1	2.35	139.99	118.94	121.73	123.53	129.80	145.77	120.06	144.70
World Ex. So. Af. (2231)	141.57	−0.7	122.28	123.91	127.78	131.39	+0.0	2.62	142.51	121.08	123.92	125.74	131.36	148.66	122.92	145.32
World Ex. Japan (1839)	145.80	−0.8	125.93	127.61	131.61	137.51	−0.1	3.56	146.96	124.86	127.79	129.68	137.64	152.83	126.69	144.17
The World Index (2291)	141.99	−0.7	122.64	124.27	128.16	131.53	+0.0	2.63	142.93	121.44	124.28	126.12	131.51	149.01	123.28	145.59

Latest prices were unavailable for this edition.

Revision of world indices reflects changes over the past four years

Adrian Dicks of FT Statistics explains the review of the Financial Times-Actuaries World Indices, and the changes that result

THE FT-Actuaries World Indices, which celebrated their fourth birthday last March, were set up a few months before the start of a period of turbulence in the world's financial markets. The aim of the Financial Times and its partners in the venture – Goldman Sachs, County NatWest Wood Mackenzie and the Institute and Faculty of Actuaries – was twofold:

● The World Indices were to provide a set of yardsticks for the world's principal stock markets.

● They were to offer an independent solution to investors wishing to peg the performance of their portfolios to the changing relative values of groups of markets.

Since then, the World Indices have gained wide acceptance among investors and analysts of the financial markets, and especially among portfolio managers running international index-tracking funds.

With all these users in mind, the World Index Panel decided last year to carry out a detailed review of the FT-AWI rules as they affect each of the 24 markets currently included, and to reflect the changes of the past four years.

The aim was also to take advantage of the improvement in price data which has followed the introduction of continuous trading to new markets, and of the greater volume of corporate financial disclosure.

Within each market, researchers have checked every company to make sure that the indices continue to follow their original guidelines – that constituent stocks should be readily tradeable and freely accessible to international investors, that the selection for each country should reflect the sectoral distribution of the local market, and that coverage should be as broad and consistent as possible.

Reviewing the rules has created some difficult issues. Some countries, for example, have a distressing tendency to put on weight without trying. There must be no bias in the representation in the World Indices of different countries' markets; all should be represented in the same proportion to the equity available. The panel's objective is to cover in each country between 82 and 90 per cent of the "investible universe" – that is, the total value of the stocks available to international investors in that market.

Yet in Finland, coverage had crept up to 98 per cent of the investible universe. The explanation was a simple one: the value of all the shares available to non-Finnish investors is only 11 per cent of the total market – an extreme case, although neighbouring Sweden and Norway have kept foreigners down to 29 and 41 per cent respectively.

The UK, at the other extreme, is the country with the least restrictions on portfolio investment by non-nationals, with 94.3 per cent of stocks available. Here, the World Indices were covering 90 per cent.

The remedy was clear. The indices had to shed weight dramatically, and plenty of well-known names are to be deleted.

Other countries were seriously underweight. In Malaysia, changes to foreign investment rules are making far more stock available to the external investment community.

The extensive changes to the Mexico list also reflect a new local environment; foreigners can now buy nearly all securities through the Nafinsa Trust depositary scheme.

In many countries, the "screens" for size, free float and marketability thinned out the candidates for inclusion when applied to individual companies. Normally, stocks where less than 25 per cent is available to the investment marketplace would be excluded. Yet there were companies so large in the context of their local market that the rule seemed perverse; Hong Kong Telecom was one prominent example. The panel decided to include these stocks where the capitalisation of the shares available to investors was large enough to pass the minimum size test.

Large companies in several European countries remain ineligible because of huge, long-term holdings by governments or bodies under their control. Relatively small companies have been added to maintain a balance between sectors comparable to that of the local market.

In a few countries it was hard to reflect the changing industrial complexion. South Africa's economy may be far less dependent on gold than in the past, yet the structure of the Johannesburg stock market still looks much as it did 20 years ago.

A dozen smaller gold mines were deleted, yet the weighting of the Basic Industries economic sector has gone up to 69 per cent in the new index from 60 per cent in the old.

Net effect of changes to the FT-Actuaries World Indices

	Current Index		Revised Index		Net Change	
	% of World	No. of Secs.	% of World	No. of Secs.	% of World	No. of Secs.
Australia	1.4	74	1.4	72	−0.1	−2
Austria	0.2	19	0.2	20	0.0	1
Belgium	0.7	60	0.7	48	0.0	−12
Canada	2.1	117	2.1	115	−0.1	−2
Denmark	0.4	31	0.4	37	0.0	6
Finland	0.0	21	0.0	16	0.0	-5
France	3.1	112	3.1	115	0.0	3
Germany	3.7	88	3.4	65	−0.3	−23
Hong Kong	1.0	47	1.2	55	0.2	8
Ireland	0.1	17	0.1	18	0.0	1
Italy	1.4	91	1.5	77	0.0	−14
Japan	32.6	452	33.2	474	0.6	22
Malaysia	0.1	33	0.2	68	0.0	35
Mexico	0.3	12	0.4	15	0.1	3
Netherlands	1.6	40	1.5	31	−0.1	−9
New Zealand	0.1	14	0.1	13	0.0	−1
Norway	0.1	30	0.1	32	0.0	2
Singapore	0.2	25	0.3	38	0.1	13
South Africa	0.9	60	1.1	61	0.2	1
Spain	1.1	41	1.2	55	0.2	14
Sweden	0.4	27	0.4	27	0.0	0
Switzerland	1.4	65	1.4	57	0.0	−8
United Kingdom	10.9	295	10.2	241	−0.7	−54
United States	36.2	524	36.0	526	−0.2	2
World	100.0	2,295	100.0	2,276	3.9	−19

Source: The Financial Times Ltd, Goldman, Sachs & Co, and County NatWest/Wood Mackenzie

The panel's next task will be to review the classification system below economic sector level. The present system is included in the new World Indices rule book, yet there is clear demand among institutional investors for a new structure which can be applied worldwide.

Domicile is another problem. Transnational hybrids such as Eurotunnel can be "split" in proportion to the listing of their shares between France and the UK. But what to make of Jardine Matheson or Hongkong Bank? And what of cases such as the Dutch or Scandinavian "internationals", consistently traded most heavily in markets outside their countries of origin?

Comment from users of the indices is welcome.

Details of the constituent changes, which will come into effect with the calculation of the World Indices on Monday June 3, 1991, were published in yesterday's Financial Times.

The new FT-AWI rule book is available from the Financial Times, One Southwark Bridge, London SE1 9HL, price £50.

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